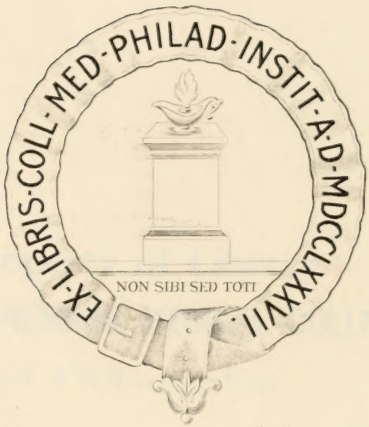

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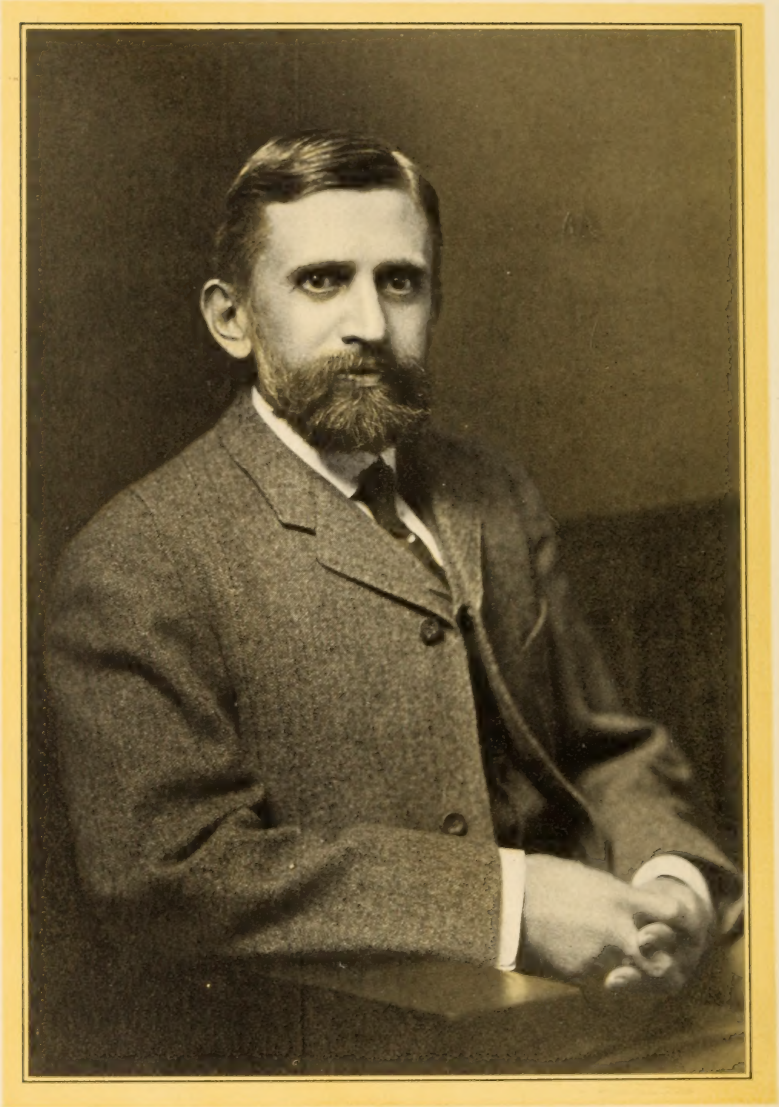

Cordially Yours,
William A. Seibert

SIMILIA SIMILIBUS CURENTUR.

TRANSACTIONS

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OF

FORTY-FIRST AND FORTY-SECOND SESSIONS

OF THE

HOMOEOPATHIC MEDICAL SOCIETY

OF THE

STATE OF PENNSYLVANIA.

Held at the Hahnemann Medical College, Philadelphia, June 12, 1905 and Nicholson Building, Altoona, September 19, 20 and 21, 1905.

LANCASTER, PA.
THE EXAMINER PRINTING HOUSE.
1905.

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(1 yr.) D. C. KLINE, M. D.,.....Reading.
do H. B. WARE, M. D., ...Scranton.
do I. B. GILBERT, M. D.,.....Philadelphia.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Publication herewith presents the Transactions of the Forty-first and Forty-second Sessions of the Society, held at Philadelphia and Altoona, respectively.

The Committee desires to express its thanks to the members reading papers for their assistance in promptly handing to it the papers read before the various Sections.

E. M. GRAMM, M. D., *Chairman;*
ELLA D. GOFF, M. D.,
G. B. MORELAND, M. D.

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TRANSACTIONS

OF THE

FORTY-FIRST SESSION

OF THE

Homœopathic Medical Society

OF THE

STATE OF PENNSYLVANIA.

Held at the Hahnemann Medical College,

Philadelphia, June 12, 1905.

Philadelphia, June 12, 1905.

A special meeting of the Homœopathic Medical Society of the State of Pennsylvania was held at the Hahnemann Medical College, Philadelphia, at 3 P. M., for the election of members, being the forty-first session of the Society.

The meeting was held pursuant to the following call:

Philadelphia, May 29, 1905.

A special meeting of the Homœopathic Medical Society of the State of Pennsylvania will be held in the Hahnemann Medical College, Philadelphia, at 3 P. M., June 12, 1905, for the election of members who desire to join the American Institute of Homœopathy.

By order of the Board of Trustees,

W. A. SEIBERT, M. D., *President.*

E. M. GRAMM, M. D., *Cor. Sec'y.*

The meeting was called to order at 3 P. M. by the President, W. A. Seibert, M. D., fourteen members being present.

In the absence of the Recording Secretary the Corresponding Secretary was, on motion, directed to keep the minutes.

REPORT OF THE BOARD OF CENSORS.

The Censors reported having examined into the qualifications of the following applicants for membership, and they were thereupon, on motion, elected:

F. E. Bamberger, M. D., Lebanon.
Charles W. Bartine, M. D., 253 W. Hansberry St., Philadelphia.
J. M. Byer, M. D., Bustleton, Philadelphia.
I. B. Chantler, M. D., 537 Beaver St., Sewickley.
William Erwin, M. D., 4844 Cedar Ave., Philadelphia.
G. S. Fisher, M. D., Lebanon.
W. L. Franck, M. D., 173 W. Tabor St., Olney, Philadelphia.
Verner S. Gaggin, M. D., 5182 Liberty Ave., Pittsburg.
M. B. Gerberich, M. D., Lebanon.
A. E. Heimbach, M. D., Renovo.
James Hollowell, M. D., Parkesburg.
W. H. Huber, M. D., Edge Hill.
Wm. C. Hunsicker, M. D., 130 N. 18th St., Philadelphia.
W. J. Kiefer, M. D., Lebanon.
Seth W. Kistler, M. D., Nanticoke.
Henry A. Lacy, M. D., 743 N. 17th St., Philadelphia.
H. P. Leopold, M. D., 332 W. Chelten Ave., Philadelphia.
George E. Levis, M. D., 1746 Orthodox St., Philadelphia.
Seth S. Miller, M. D., Susquehanna.
W. W. Nuss, M. D., Wissinoming, Philadelphia.
F. L. Richards, M. D., Berwyn.
William F. Roth, M. D., Wilkes-Barre.
Wm. F. Satchell, M. D., Freemansburg.
John A. Shower, M. D., 104 S. Beaver St., York.
Henry B. Strock, M. D., Bedford.
M. A. Wesner, M. D., 407 Franklin St., Johnstown.
H. C. Witmeyer, M. D., Lebanon.

On motion adjourned.

Attest: EDWARD M. GRAMM, M. D.,
Recording Secretary pro tem.

TRANSACTIONS

OF THE

FORTY-SECOND SESSION

OF THE

Homœopathic Medical Society

OF THE

STATE OF PENNSYLVANIA.

Held at the Nicholson Building, Altoona,

September 19, 20 and 21, 1905.

The President, William A. Seibert, M. D., called the meeting to order on the morning of September 19, 1905.

Rev. O. C. Roth, D. D., invoked the divine blessing.

R. L. Piper, M. D., of Tyrone, on behalf of the Raue Medical Club of Central Pennsylvania, delivered the following

ADDRESS OF WELCOME.

Mr. President, Fellow Members of the State Homœopathic Medical Society and Ladies:

The pleasure and honor of bidding you welcome to the City of Altoona in behalf of the Raue Medical Club falls to my lot this morning. A pleasure because we anticipate a few days of good fellowship, and the interchange of happy and instructive reminiscences whereby memory can once more guide us through the art galleries of the soul and brush the cobwebs from the pictures of the past. An honor because we welcome you in the name of one who by his patient and untiring researches into the realms of Homœopathic medicine and the transmission of the knowledge gained by those researches to his confreres and successors built for himself

a monument which will endure centuries after we are dead and forgotten—Dr. Charles G. Raue, whose name honors our local medical society. Again an honor, because of this being the 150th anniversary of the birth of Samuel Hahnemann, whose life of incessant labor, frequent persecution, and final triumph furnishes us an inspiration ennobling in its character. We wish to tell you that for one year we have looked forward to this meeting. That during our regular and special meetings when ideas were suggested and plans formulated which we hoped would be conducive to your comfort and pleasure, not a single note of discord jarred the harmony of our proceedings. Now with but one poor solitary exception the members of the Raue Medical Society have wives, and it is scarcely necessary for me to say that we were most amiably encouraged and assisted by the ladies—our wives. They suggested, invented and commanded. We obeyed. This probably accounts for the fact that there was no discord at any of our meetings. We hope and believe that our meeting in Altoona this year will be memorable not only on account of the renewal of old associations and friendships, but in the propagation of newly discovered medical truths. Not fanciful theories evolved from over-imaginative and over-enthusiastic brains, but facts gleaned from that greatest of teachers, experience. Once more allow us to bid you welcome. And let us assure you that individually and collectively the members of the Raue Medical Club are at your service. And back of them are the friends of Homœopathy in the City of Altoona, and they are legion, who delight in your presence and who wish you Godspeed in your work.

I now have the honor to introduce to you Thomas C. Hare, Esq., who will welcome you in behalf of the citizens of Altoona.

Thomas C. Hare, Esq., City Solicitor, on behalf of the Citizens of Altoona delivered the following

ADDRESS OF WELCOME.

Mr. President, Ladies and Gentlemen:

It is not the least among the honors which have come to this city that it has been selected by your Society as the place for holding its annual convention. I am not a hero worshiper, or devotee of any man or his name, but on behalf of the citizens of this city I desire to-day to pay tribute to the memory of the master of your craft,

whose achievements and accomplishments for the benefit of mankind entitle him to a high place in the temple of fame. The city of his birth, as well as the city of his adoption, denied him the enjoyment of the fruits of his toil and investigation. Time, however, has softened these prejudices, and to-day your profession is not only among the honored, but in accomplishment and achievement has attained rare distinction. We are, therefore, glad to have you among us, realizing full well that we shall be the beneficiaries of your wisdom, culture and knowledge. You will recall the difficulty at Ephesus between Paul and the silversmiths, when the policy of Paul required him to inveigh against the worship of false gods. The silversmiths united in the cry of "Great is Diana of the Ephesians." This recalls to my mind the difficulty between Hahnemann and the apothecaries at Leipsic. You will remember when Dr. Hahnemann instituted his new theory of practice, the apothecaries united to secure the enactment and promulgation of a decree prohibiting the administration of drugs by the physician

In looking over your program, which was handed me last evening, I note with some regret, I say it not in a spirit of criticism, that there is an absence of certain matters which, in the light of the history of Dr. Hahnemann, might well engage the attention of your convention. A time one hundred and twenty-five years after the difficulty between the apothecaries and Dr. Hahnemann seems to me to be ripe for a convention of physicians of the school which you represent. Have we any apothecaries to-day? Do you know of any of the old style apothecary shops? We have drug stores, visions of marble founts and fizzing cups, tier upon tier of cordials, upon which are emblazoned advertisements, stating that they are panaceas for all ills and cures of all characters and descriptions, and I take it that the time has come, not only for the Homœopathic school, but for all schools of medicine, to unite in one effort for the purpose of securing the enactment of proper legislation for the restraint of placing before the public and selling to an uninitiated public (those who are not skilled in the administration of drugs and taking of medicines) what is and what is not proper to be taken into the human system. When drugs and concoctions, mainly of alcohol, soothing syrups of morphia, teething lotions of cocaine, and things of similar character and description may be sold ad libitum over the counter of any drug store, or any sort of store where you may choose to buy them, I say the time has come for the

benefit of the people at large that organizations of this character of all schools shall unite to secure proper legislation that these matters may be properly restrained, that these articles may be properly placed before the public, that those who buy them may know what they are using. Of a kindred character is the adulteration of foods. This is a matter which should engage your earnest attention. As I said before, I note with a degree of regret the entire absence on your program of matters of this character, and I know that disciples of the great Hahnemann, the man who was compelled to blaze the way in his profession, who encountered opposition from all sides, who was ostracized and compelled, practically, to practice under the guidance of a private individual, who was banished, practically, from his own country, and found his fame among a foreign nation, you who have imbibed the spirit of the great master, will surely unite in some effort to correct these abuses. This is by way of digression, as I said, not uttered in a spirit of criticism, but to call your attention to some matters which should engage your serious attention.

The difficulty about all of the learned professions is their desire to take themselves apart from the affairs which engage the attention of mankind. We are too clannish. One school of physicians settle by themselves and another by themselves. The lawyers are accused of being of a similar character, and to a certain extent they are. So are the ministers, and there seems to be a lack of co-operation among all the learned professions to get together for the purpose of uniting in an effort to correct the abuses which seem rampant in the country to-day. However, as I said, this is by way of digression.

On behalf of the city it is needless for me to say that you are welcome. We have not flowing fountains, boulevards, marble and brownstone fronts to greet you upon every side, or streets paved with gold, though some do say that some of our walks are paved with gold bricks. However that may be, to what we have you are welcome. We hope you will have an enjoyable time; we know you will. Physicians are all good fellows, and like all good fellows, when they get together they are sure of a time of enjoyment. Figuratively speaking, I offer you the city. It is yours. What you want of it take, only leave a little bit when you go.

C. S. Raue, M. D., of Philadlephia, gave the following

RESPONSE TO THE ADDRESSES OF WELCOME.

Mr. President, Members of the State Society, and Mr. Hare:

I wish to thank you, on behalf of the Homœopathic Medical Society of the State of Pennsylvania, for this gracious welcome that the citizens of Altoona have extended to us. We also wish to thank the Raue Medical Club of Central Pennsylvania for the untiring efforts they are making to entertain us at this meeting. We wish to say to you that it has been a pleasure to us to come to Altoona, not only for the sake of attending this meeting, but also to enjoy your hospitality and get a glimpse of the surrounding country and the mammoth industries for which Altoona is justly famous. We feel that the Society has made a wise choice in selecting Altoona for this meeting, and we hope to be with you in the near future. It also gives us great pleasure to come in personal contact with the individual members of the Raue Club, for we have heard much of you, and have felt a kindly interest in the good work you are doing in behalf of Homœopathy in this section of the State. As to these meetings, they have ever been good in the past, and truly we can be proud of them. Not only have they been good, but they are getting better from year to year. If you will look over the Transactions of this Society, as issued, you will be gratified to learn that the scientific standard of the papers and of the discussions is constantly rising, and that the Homœopathic profession is fully in harmony and accord with the progress that the science of medicine is making. Were not this true, Homœopathy certainly would not occupy the proud position it occupies to-day. We also trust that this will be a banner meeting not only from the standpoint of attendance and new members acquired, but we hope that it will be the most earnest and most scientific meeting yet on record. We surely cannot stand still; we must progress. Discoveries in chemistry, in physics, in physiology, and the careful laboratory work done in other branches have upset many of the theories and speculations of the past. It is therefore up to us to reconcile Homœopathy with these discoveries and make full use of them. We have not been blind to the advance made in therapeutics and in preventive medicine, nevertheless the bulk of our work still requires careful homœopathic prescription as much to-day as ever. Let this be said to the credit of the homœopathic school, we are willing to try all things and hold fast to that

which is good. Gentlemen, I thank you again on behalf of the Society for your gracious welcome.

The President, William A. Seibert, M. D., thereupon delivered the following:

ADDRESS OF THE PRESIDENT.

My first word must be expressive of appreciation of this compliment to the dear old Lehigh Valley Homœopathic Medical Society, which took so much pleasure in entertaining you at Easton last year. Nor am I unmindful of your unanimous partiality in virtue of which I am occupying this conspicuous place to-day, the highest honor in your power to confer. I thank your profoundly for these considerations.

Because of custom, and not in compliance with the demands of your By-Laws, I am writing an annual address. If your vote were invited I am certain you would say "be brief," and very informal and brief it shall be.

Whatever success this forty-second session of the Homœopathic Medical Society of the State of Pennsylvania shall enjoy during this week should be attributed to the unselfish devotion and a remarkable co-operation of the various officers and committees of your body, as well as to the chairmen of the various sections. My requests have been very promptly acceded to, their many helpful suggestions have ever been courteous, and their patient help whenever required have constituted the co-operative power behind the successful meeting about to open. I take this early opportunity of thanking these individuals, and I am certain you will join with me in "rendering to Cæsar that which belongs to Cæsar."

I wish to enter a strong plea for much consideration in behalf of several of your committees. I recognize in the Membership Committee one of the strongest factors of your organization, and I would, therefore, suggest that you provide for its permanency and enlarge its duties and powers, under the name of Membership and Organization Committee, adapting your By-Laws accordingly. This committee becomes effective only after having thoroughly familiarized itself with its peculiar duties, and I would, therefore, recommend that the members be appointed for a term of two years, the committee to consist of six untiring, generous and self-sacrificing members, and that three be appointed on alternate years. It is

only fair to add, as it is necessary, that the committee of the past two years serves as a noteworthy example of the importance and value of such a committee. I would suggest that the scope of work be outlined to include not only the soliciting of new members and urging full attendance at meetings, but that they also take in hand the very important work of organization throughout our State. After several years of active work in the field I am prepared to say that we are as a society, neglecting this most important work. Every county of this State should have its society, or, at least, be a part of a bi- or tri-county society. There are only a baker's dozen out of the sixty-seven (67) counties of our great Commonwealth that have thus organized. This field alone affords material for one of the most wonderful reports ever presented to this Society. Its labors would result not only in increase of membership and better attendance for this Society, but also in the formation of new societies throughout the State. "In union there is strength," not only the strength that your Legislative Committee will tell you is so essential at Harrisburg, but a power bearing directly on the harmony between the individual physicians of a county upon their prosperity and their scientific advancement. The good that is returned to the laity after the family doctor's "day off" to the county society, the protection of the public from the tricks of the illegal practitioner, the discussion of matters of public health, we feel as though the enlightened laity should arise in a body and demand of their family doctor that he unite forthwith with the county society.

Bearing directly on the matter of organization, I hesitate to draw your attention to the one particular disorganizing factor that is of vital importance to this Society at this time. There are by actual count only two hundred and fifty (250) members in full paid up standing, this including the sixty-five (65) new names that were added to our membership roll at the last meeting. The methods for collecting delinquencies have not been business-like, we admit, but the delinquents are none the less excusable for being so thoughtless. Let me suggest that you consider the advisability of remitting some or all the dues and begin anew with stringent business-like methods for collecting the annual dues henceforth, and that no such action be taken without carefully providing in the By-Laws for the enforcement of the plans you wish to adopt. But let me entreat you, for the good of the Homœopathic Medical Society of the State of

Pennsylvania, that you do something with this destructive parasite, and do it at once.

The Legislative Committee deserves much praise for the enduring good that has been done by a few of its energetic members. The labors of this committee are unpretentious as they are tremendous. Not everyone is suited for this special kind of work, however, and those endowed with legal sense and political tact, with a never failing good nature, are always most successful. A few such this Society can boast of. My plea is that more members develop themselves in this specialty.

The Interstate Committee of the American Institute of Homœopathy expects the various State societies to appoint active working delegates upon whom they may call for at least a full knowledge of all legislation, State, county and municipal. Dr. Custis, the indefatigable chairman of this Committee, is now working hard for a practical reciprocity between the licensing boards of the different States. The object is to protect our students, from whom we are requiring such rigid examinations, against the inroads of osteopaths, Christian scientists, psycho-medico physicians, etc., etc., not to interfere with the methods of practice of any one, but simply to demand that every person who presumes to make a diagnosis of disease and to give advice or treatment with the hope or expectation that the same will result in the betterment of the patient's condition shall be held as subject to all the responsibilities assumed by graduates of our chartered medical colleges and licentiates of our examining boards. We solicited, from most unselfish motives, the enactment of rigid laws for our students, and the overt subversion of these laws as is being attempted by this class, that has acquired remarkable legislative strength, makes it obligatory that we wake up to the actual situation. Such matters are being considered by the Interstate Legislative Committee. I would recommend that a committee of two be appointed to serve in this capacity for at least two years each.

In this connection I wish also to recommend that this Society consider seriously the advisability of merging the scientific session of our State Society with those of the International Congress, to be held at Atlantic City next September, and that we appoint delegates to represent this Society on that occasion.

Another special committee whose work stands out prominently because of the good it has done during the past two years is the

Press Committee. The work of the Press Committee stands for the kindness and fairness of the press throughout this State. Its constituency, like that of some other committees, calls for special qualifications that some members possess and others could never acquire. Properly consituted, it is a powerful factor, not only in the general oversight of the press reports of this Society's proceedings, papers and discussions, but it may have a hand in pressing the claims of Homœopathy for equity and justice; in preventing the publication of fabulosities that bring the Homœopath into ridicule and cause every honest physician to blush for his kind, and it may help to expose and oppose matters that deserve it, whether in behalf of physician or public, as well as print our pictures and give a carefully prepared extracts of some extempore remarks we are going to make. I, therefore, recommend that the Press Committee, as well as the Membership and Organization Committee, be added to our list of standing committees.

The Institute of Drug Proving of the American Institute has undoubtedly set before it an herculean labor, and our Society is to be commended for the interest it has manifested substantially by voting two hundred and fifty dollars ($250.00) for its encouragement. May the minds that have conceived the plans be endowed with all the wisdom necessary for the accomplishment of the work, and may their lives be spared to enjoy the ripe fruition of their efforts. The question arises whether we, as a powerful organization that we are, can not be of decided practical help to them in these reproving steps. As presiding officer of the Homœopathic Medical Society of Pennsylvania, I am certain that I am voicing its unanimous desire to help and never hamper its efficiency.

It is appropriate on this 150th birthday anniversary of the father of Homœopathy to recite the present status of Homœopathy in Pennsylvania, and to review the relation of the two dominant schools of medicine to each other as fairly as possible. As far as the law itself is concerned, as such, I think you will agree with me, we are not any nearer together. We believe the law of similars to be true or we are not Homœopaths, and it would be becoming to resign from this Society and no longer sail under false colors. Regarding the old school it may be fairly said that they do not believe the law to be valid, and that such good as they have derived from us has been appropriated empirically, precisely as has been done

since the time of Galen and Hippocrates. If the law of similars determines our relations, therefore, we are no nearer together.

What has happened to cause it to appear that the two schools are closer together, and rapidly uniting under the same banner for the healing of the sick, as should be the case, and to which end we should have great care not to interpose the slightest obstacle? The old school has modified its dosage and withdrawn much of the senseless antagonism that never would and never will right a wrong in ethics or science. They are slowly correcting these wrongs and are fair enough to their sick to appropriate with astonishing rapidity our remedies as well as the dosage, albeit empirically. How could it be Homœopathically? I shall go further and say that the best Materia Medica researches have lately been made by the old school. I heard one of our best Homœopathic students and thinkers say only lately that Dr. Sajous had been doing the best Homœopathic Materia Medica work of the past decade. Yes, we are thus coming closer together, and 'the wind bloweth where it listeth,' too, let us not close our eyes to facts, and the prophecy is apropos that in our zeal to oppose the old school we may find ourselves merely fighting the battle of Kilkenny cats, or worse, that we find ourselves fighting against the very cause that we mean to espouse. The time seems rapidly approaching when the law of similars will in some form or other become irresistible, and the two schools become one and the same in belief as well as purpose. May God speed the day when proof or disproof shall have scientifically wiped away all barriers beyond the shadow of a doubt, all of which is certain to come if the law of similars is proved irrefutable.

Dr. Wm. Osler's recent plea for "Unity, peace and concord" was graceful and only another demonstration of the greatness of the man. Let me urge everybody to read that address delivered on last April, 21st, before the Medical and Chirurgical Society of Baltimore. He says, 'I admit the original mistake was ours.' 'Let us have unity,' and his one parting word to all throughout this broad land was 'Charity.' He pleads for unity and charity, but says nothing of liberty. Are we quite ready for the amalgamation that all who are engaged in this noble art of healing the sick should long for? Our code of ethics has ever been liberal, and we are ever trying to live up to the motto, 'In certis unitas, in dubiis libertas, in omnibus caritas. Let me draw your attention to an interesting comparison that I am sorry is not complete so that I might furnish

statistics. Your attention will undoubtedly be drawn to it later. Our Pennsylvania Health Commissioner is an allopathic physician, the New York State Health Commissioner is a Homœopathic physician. They are at present appointing health inspectors, etc., and I repeat that it would be unfair at this time to tabulate a comparison to demonstrate liberality or liberty.

Now let us be frank with ourselves in viewing the present position of our own school, to demonstrate that the deflection toward a common ground of practice has also been shared in by the party of the second part. Ethically we have not deflected from our position unless that we, as individuals, perhaps seem readier to affiliate with the old school societies. Their bars down, and nothing to prevent practicing and believing as we choose, nothing should prevent fraternizing, believing, studying and practicing as we believe, provided we are positively on even footing, allowed equal advantages for investigation in college and laboratory, and, in short, have not 'sold our birthright for a mess of potage."

What has the new school done to make it appear that the two schools are rapidly coming together? Ambitious and zealous to keep up with the rapid strides that the old school particularly has been making in the collateral subjects, and while drifting into specialties as practitioners, we have been lamentably neglecting our Homœopathic Materia Medica and Homœopathic therapeutics. Surgeons, oculists, nose and throat, chest, skin and other specialists have found much to interest them and to benefit their patients by, in the mechanical, antiseptic and hygienic fields that are being so industriously developed. Perhaps not intentionally ignoring the value of Homœopathy in the treatment of their cases while engaged in such non-conflicting collateral work, yet I make bold in contending that study and investigation has been diverted to a very great extent. I think I am justified in claiming that our surgeons are as good as the best in the world, that the same can be said of our other specialists with equal propriety, but I do claim that the rapid evolution of modern medicine with its collateral subjects has undoubtedly interfered with the development of Homœopathic Materia Medica and Homœopathic therapeutics, and that the Homœopathic school has also unwittingly deflected towards a union of the two schools. The recommendation, therefore, that we devote more energy towards the proving of the faith that is in us is quite opportune. Do encourage in every way the work of the provers'

union, but in order to help in making the science of Homœopathy irresistible, or, if possible, to prove its fallacy, let me make a suggestion. The keen-minded Huxley declared that 'science warns us that an opinion which outstrips evidence is not only a blunder but a crime.' Let us form a *Disprovers'* Union, if you please. Let us take a symptom enunciated by anybody as the result of a proving, and make a distinct history of such symptom, reporting by whom first observed, and all future authorities in order of adoption. Let the blame or credit for its existence be properly placed, and be hereafter as a part of the symptom. If possible, also, to enumerate all the clinical verifications with the authorities for them adduced. I hear the plaint of laziness before I have fairly announced the scheme, but, ladies and gentlemen, if one single rubric of one single remedy is once fully treated in this manner, I want to ask, do you think the resulting evidence would help at all in establishing our science, or may it be that it might *disprove* the truth of Homœopathy? If science is classified knowledge, and, if, as we pretty generally agree, our Materia Medica is greatly trash, while others hold that every symptom should be preserved regardless of authority, the latter may yet be accommodated, and the former be gratified ad libitum. But be it to verify or disprove, I claim the task is staring us in the face. Would that our Homœopathic Medical Society of Pennsylvania were the first to inaugurate this step towards establishing beyond a doubt that Homœopathy is a science based on scientific principles, and barriers between schools will melt away more rapidly than ever. The medical profession is quite ready to accept any truth that can be proved to its full satisfaction, and just as ready to discard any claim that can be disproved. I am reminded of a remark attributed to our late Dr. Charles G. Raue. He said: 'Beware of the big "IF" in the very middle of the word scientIFically.' Perpetual motion has been *almost* proved; and at the very present time John Butler Burke is *almost* succeeding in establishing the origin of life by his wonderful experiments with radio-activity; bacteriology *almost* proved the origin of disease. I do not wish to be understood as making disparaging remarks regarding scientific investigation, though they fail, but 'Prove all things, hold fast that which is good.' 'Opinion which outstrips evidence is not only a blunder but a crime.'"

New members of the State Society and friends, we are about to be entertained for three days by the plucky little Raue Club. They

have welcomed us, and I know they will intersperse our deliberations with many pleasures. May we do the Raue Club honor, and open many eyes in this beautiful section of country to the truths of Homœopathy. Last year this Society, incidentally with its visit to Easton, commemorated the name of Dr. Henry Detwiller, the pioneer of Homœopathy in this State. This year the Society does itself honor by honoring the name of Dr. Charles G. Raue, after whom the Raue Club is named. Both these men were renowned scientists. Dr. Detwiller a naturalist and linguist, and Dr. Raue a psychologist. Raue's Pathology, the work by which he is best known to us, is not one of the books like the majority now being published, that will pass rapidly into oblivion; it was first published in 1868, and I do prophesy that in 1968 it will still be a book of reference. It stands as a glorious monument to his love for real Homœopathic practice. Dr. Raue was also the author of an exhaustive and masterly work on psychology, that is recognized by metaphysicians as one of the most profound in existence. Like Dr. Detwiller he had many honorary degrees.

These are only two names of the scores of renowned scientists that recognized and were willing to subscribe to the truths and tenets of Homœopathy.

Long live Homœopathy!

On motion, the address of the President was received with the thanks of the Society, and a committee of three on President's Address was directed to be appointed to report to the Society on the various recommendations contained therein. The Committee appointed consisted of Drs. B. F. Betts, C. S. Raue and Z. T. Miller, which, later, presented the following:

REPORT OF THE COMMITTEE UPON THE PRESIDENT'S ADDRESS.

Your Committee appointed to report upon the President's address had also the suggestions contained in the report of the Committee on Organization, Registration and Statistics referred to it for consideration.

Embracing the recommendations from both these sources, they propose the following addition to Article IX. of our By-Laws, to be voted upon at our next annual meeting, viz.:

The President shall appoint a Committee on Membership and

Organization to consist of six memers to serve for two years, so appointed that three members are appointed each year.

It shall be the duty of this Committee to aid in securing new members for this Society; to urge attendance at the annual meetings, and to promote the organization of county or other local societies, so that the fraternal and close professional relationship of the members of the Homœopathic profession may be improved in every way possible.

Your Committee endorses the recommendation from the Committee on Organization, Registration and Statistics, and suggests that the new Committee on Membership shall secure the attendance of other members of our profession, who are not members of these local organizations, to present papers or engage in the discussions with members of these societies at their meetings whenever requested to do so.

Your Committee is confident that this Society endorses the sentiment expressed by the President, that the profession in every county in the State should have its local society, or at least constitute a part of a bi- or tri-county organization, and that the importance of attendance at our annual meetings should be brought to the attention of every member of the Homœopathic profession.

Your Committee repeats that inasmuch as the annual dues of this Society have been reduced to three dollars, that portion of the President's address referring to the question of remission of the dues of delinquent members be referred to the present special Committee on Membership and Organization for a report, and that this Committee shall be instructed to put into effect such measures as may secure the payment of uncollected dues wherever it is possible, and report to this Society all cases in which such payment might prove a hardship so that the Society may take suitable action.

Inasmuch as the joint meeting of the American Institute of Homœopathy and the International Homœopathic Congress will occur at Atlantic City in September of next year, the recommendation of the President that the scientific sessions of this Society shall be omitted for that year is submitted to this Society at this time for its decision.

The appointment of delegates from this Society to the International Homœopathic Congress is recommended.

Your Committee recognizing the importance of the President's

recommendation that the authenticity of all the symptoms recorded in our works upon Materia Medica should be reliably established, suggests that this subject be referred to the Institute of Drug Proving of the American Institute of Homœopathy for their action and consideration.

That portion of the Legislative Committee's report which pertains to the necessity for legislation intended to restrict the sale of patent or proprietary medicines containing dangerous and enslaving drugs was also referred to the Committee on the President's Address, and we are unanimously of the opinion that such sale should be allowed only when a statement of the exact nature of such dangerous or enslaving ingredients is plainly exposed to view on the outside of all receptacles in which these proprietary articles are sold, and, therefore, submit the following resolution for adoption by this Society, viz.:

Resolved, That the Legislative Committee of the Homœopathic Medical Society of Pennsylvania is hereby requested to use every effort possible to secure such legislation as will prevent the sale of dangerous and enslaving drugs in what are termed proprietary and patent medicines unless the receptacles in which these drugs are sold shall plainly indicate the nature and amount of such dangerous ingredients in each package, or by such other enactment as may seem necessary.

B. F. Betts, M. D.,
Z. T. Miller, M. D.,
C. S. Raue, M. D.,
Committee.

On motion, the report of the Committee was accepted and the Committee discharged with the thanks of the Society.

On motion, the various recommendations of the Committee were adopted, and the recommendations directed to be carried out by the proper officers and committees.

Drs. C. M. Richards and C. W. Perkins were appointed acting Censors during the absence of the regular members of the Board of Censors.

The minutes of the special meeting (the forty-first session of the Society) held in Philadelphia on June 12, 1905, were read and approved.

The program as issued by the Corresponding Secretary was adopted as the program of the meeting.

ORDER OF BUSINESS.

TUESDAY, SEPTEMBER 19, 1905.

Morning Session, 10 *to* 1 *O'Clock.*

1. Call to order.
2. Invocation.
3. Address of welcome.
4. Response to address of welcome. C. S. Raue, M. D.
5. Address of President. W. A. Seibert, M. D.
6. Roll call.
7. Report of Corresponding Secretary.
   Adoption of program.
8. Report of Trustees.
9. Report of Committees.
   a. Organization, Registration and Statistics. G. B. Moreland, M. D., Chairman.
   b. Legislation. D. P. Maddux, M. D., Chairman.
   c. Publication. E. M. Gramm, M. D., Chairman
10. Report of delegate to American Institute of Homœopathy. J. H. McClelland, M. D.; alternate, Edward Cranch, M. D.
11. Report of delegates to the Inter-State Committee of the American Institute of Homœœopathy. B. F. Betts, M. D., and F. W. Boyer, M. D.
12. Report of the Necrologist. Chandler Weaver, M. D.
13. The following amendments to the By-Laws were properly presented at the last meeting of the Society:

Amend Section 2, Article IV, of the By-Laws by striking out these words: "The officers shall be elected by ballot at each annual meeting of the Society." and inserting the following: "The nomination for officers of the Society shall be the special order of business for eleven o'clock of the morning of the second day of the annual meeting. The officers shall be elected by ballot, the election to be the special order of business for eleven o'clock on the morning of the third day of the annual meeting. The candidate receiving a majority of the votes cast shall be declared elected:" so that the Section shall read: "Section 2. The nomination for officers of the Society shall be the special order of business for eleven o'clock on

the morning of the second day of the annual meeting. The officers shall be elected by ballot, the election to be the special order of business for eleven o'clock on the morning of the third day of the annual meeting. The candidate receiving a majority of the votes cast shall be declared elected. The officers elected shall enter upon their respective duties on the first day of January next succeeding their election, to serve for the term of one year, or until their successors are elected, except as hereinafter provided."

Amend Section 3, Article III, of the By-Laws, by inserting after the word "meeting,' on the fourth line, these words: "Provided that the proposal for honorary membership shall have been made at a previous annual meeting, and said proposal been approved by the Board of Trustees," so that the Section shall read: "Section 3. Any Homœopathic physician, not a resident of Pennsylvania, who, by his superior attainments may be judged worthy, may, by a two-thirds vote of the members present, be elected an honorary member at any annual meeting; provided, that the proposal for honorary membership shall have been made at a previous annual meeting, and said proposal been approved by the Board of Trustees; but no more than two shall be elected in one year. Honorary members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues."

Amend Section 1, Article V, of the By-Laws, by striking out from the sixth line the words "And Chairman of the Board of Trustees;" so that the Section shall read: "Section 1. The President shall preside at all meetings of the Society. He shall preserve order, appoint all committees unless otherwise directed, and discharge all other duties usually pertaining to a presiding officer, in accordance with the provisions of the Charter and these By-Laws. He shall be, *ex-officio*, a member of all standing committees of the Society. He shall not be eligible to office two terms in succession. On assuming office it shall be his duty to appoint a Chairman of each of the Sections designated in Article VIII, Section 1, and the chairman in conjunction with the President, shall select his associates."

Amend Article IX of the By-Laws by inserting the words "which shall serve two years" after the words, "A Committee on Legislation," and by inserting the words "in alternate years" after the words "A Committee on Legislation, of at least nine members, to be appointed by the President," so that the clause shall read: "A

Committee on Legislation which shall serve two years, of at least nine members, to be appointed by the President in alternate years, whose duty it shall be to give special attention to all legislation involving the interests of the Society."

Amend Article VII of the By-Laws by striking out the whole of Article VII and substitute:

ARTICLE VII.—Dues.

SECTION 1. Active members shall pay the sum of five dollars upon their election.

SEC. 2 Active members shall pay annually, in advance, the sum of three dollars toward defraying the expenses of the Society. Any member who shall fail to pay his annual dues for three successive years shall be dropped from the roll of members, after having been notified by the Corresponding Secretary of the forfeiture of his membership. The published proceedings of the Society will be furnished only to those members who are not in arrears for dues.

SECTION OF PÆDOLOGY.

H. C. Chisolm, M. D., Chairman.

Associates—Drs. W. S. Bigelow, F. E. Howell, Anna Johnston, F. L. Muth, C. S. Raue, H. B. Strock.

F. E. Howell, M. D., Reading, "Infantile Convulsions."

Anna Johnston, M. D., Pittsburg, "Marasmus."

Blanche Jackson, M. D., Duquesne, "Tuberculosis in Children."

Irwin D. Metzler, M. D., Tyrone, "The Physician's Role in Child Development."

C. S. Raue, M. D., Philadelphia, "Abdominal Diagnosis in Children."

H. B. Strock, M. D., Bedford, "Rachitis."

Afternoon Session, 3 to 6 O'Clock.

SECTION OF SURGERY.

G. A. Van Lennep, M. D., Chairman.

Associates—Drs. T. L. Adams, L. T. Ashcraft, G. M. Christine, J. W. Coolidge, E. R. Gregg, W. N. Hammond, W. C. Hunsicker, H. P. Leopold, D. P. Maddux, J. H. McClelland, G. B. Moreland, H. L. Northrop, J. L. Peck, E. T. Prizer, S.

M. Rinehart, C. P. Seip, W. G. Steele, W. B. Van Lennep, L. H. Willard.

G. A. Van Lennep, M. D., Philadelphia, "Some Cases of Surgery of the Head."

L. T. Ashcraft, M. D., Philadelphia, "The Surgical Treatment of Prostatic Hypertrophy."

G. M. Christine, M. D., Philadelphia, "Idiopathic Gangrenous Peri-Proctitis (Jordan): a Case."

E. R. Gregg, M. D., Pittsburg, "Gauze Drainage in Septic Peritonitis."

W. N. Hammond, M. D., Philadelphia, "The Treatment of Pott's Disease."

H. L. Northrop, M. D., Philadelphia, "Fracture of the Vertebral Column Complicated With Pregnancy."

J. L. Peck, M. D., Scranton, "Tumors of the Spleen."

W. B. Van Lennep, M. D., Philadelphia, "Prostatectomy."

L. H. Willard, M. D., Allegheny, "Fractures."

Evening Session, 8 to 10:30 O'Clock.

SECTION OF PATHOLOGY AND PATHOLOGICAL ANATOMY.

J. E. Belville, M. D., Chairman.

Associates—Drs. A. L. Baker, J. D. Elliott, V. S. Gaggin, P. S. Hall, D. B. James, J. J. Tuller, T. W. Swalm.

J. E. Belville, M. D., Philadelphia, "Purpura Hæmorrhagica."

J. D. Elliott, M. D., Philadelphia, "Sarcoma of the Small Intestime."

A. L. Hartley, M. D., Philadelphia.

F. W. Smith, M. D., Philadelphia, "The Pathology of Anæsthesia."

J. J. Tuller, M. D., Philadelphia, projection lantern demonstration, "Hæmorrhagic Areas in the Internal Capsule."

WEDNESDAY, SEPTEMBER 20.

Morning Session, 9:30 to 1 O'Clock.

SECTION OF SANITARY SCIENCE.

J. D. Boileau, M. D., Chairman.

Associates—Drs. C. O. W. Bartine, J. R. Bibighaus, William Erwin, G. W. Hartman, A. C. Heritage, J. B. Heritage, W. H.

Holsberg, W. C. Powell, D. W. Straub, R. S. Summers, C. E. Tegtmeier, R. E. Tomlin, Frank Watson.

J. D. Boileau, M. D., Philadelphia, "Cause and Prevention of Yellow Fever."

C. O. W. Bartine M. D,. Philadelphia, "Milk as a Factor in the Causation and Spread of Infections Diseases."

Edward Cranch, M. D., Erie, "Tonics and Stimulants."

William Erwin, M. D., Philadelphia, "Potable Waters, Their Difference and Our Consequent Choice."

W. G. Hartman, M. D., Harrisburg, "Instituting and Maintaining the Quarantine."

W. H. Holsberg, M. D., Lebanon, "Contagions, Infections and Toxæmias as Factors in the Causation of Disease."

D. W. Straub, M. D., Bethlehem, "Salt as a Pillar of Antiseptics."

R. S. Summers, M. D., Philadelphia, "The Effect of the Sanitary Condition of Schools on the Health of Children."

R. E. Tomlin, M. D., Philadelphia, "Regime."

SECTION OF HOMŒOPATHIC INSTITUTES AND CLINICAL MEDICINE.

W. G. Dietz, M. D., Chairman.

Associates—Drs. A. P. Bowie, F. W. Boyer, Edward Cranch, W. J. Martin, Z. T. Miller, E. C. Parsons, C. M. Richards, Margaret H. Schantz, E. R. Snader, Anna D. Varner.

W. G. Dietz, M. D., Hazleton, "Clinical Cases."

A. P. Bowie, M. D., Uniontown, "The Medical Clinic Versus the Surgical."

F. W. Boyer, M. D., Pottsville, "The Present Status of the Consumptive."

Edward Cranch, M. D., Erie, "Scarlet Fever."

Z. T. Miller, M. D., Pittsburg, "Hypnotism (?) and Homœopathy."

C. M. Richards, M. D., Reading, "Homœopathy in Chronic Diseases."

Margaret H. Schantz, M. D., Reading, "Clinical Cases."

E. R. Snader, M. D., Philadelphia, "The Modern Versus the 'Old-Fashioned' Methods in the Diagnosis of Phthisis Pulmonalis."

Anna D. Varner, M. D., Wilkinsburg, "Report of a Case of Suspected Tubercular Peritonitis, Terminating in Recovery."

Afternoon Session, 3 to 6 O'Clock.

SECTION OF MATERIA MEDICA.

Oliver S. Haines, M. D., Chairman.

Associates—Drs. T. H. Carmichael, W. D. Bayley, Edward Cranch, M. M. Fleagle, A. R. Garner, J. C. Guernsey, Aug. Korndœrfer, Sr., C. S. Middleton, Chas. Mohr, O. H. Paxson, G. W. Smith, E. R. Snader, W. W. Van Baun.

O. S. Haines, M. D., Philadelphia, "The Over-Action of Drugs."

Edward Cranch, M. D., Erie, "Berberis Vulgaris." Presented on behalf of the Homœopathic Medical Society of Erie County.

M. M. Fleagle, M. D., Hanover, "Lachesis." Presented on behalf of the Goodno Homœopathic Medical Society.

A. R. Garner, M. D., Norristown, "A Few Words on Sepia."

Aug. Korndœrfer, Sr., M. D., Philadelphia, "Materia Medica Pura; Its Worth; Its Mission."

C. S. Middleton, M. D., Philadelphia, "Drug Pathogenesy, Symptomatology and Therapeutics."

Z. T. Miller, M. D., Pittsburg, "Theories Relating to the Internal Action of Homœopathic Remedies."

Chas. Mohr, M. D., Philadelphia, "Remedies for Sleeplessness."

O. H. Paxson, M. D., Philadelphia, "The Indications for the Indicated Remedy."

G. W. Smith, M. D., Philadelphia, "Verifications of the Symptoms of Some Remedies."

E. R. Snader, M. D., Philadelphia, "The Passing of the Purely Symptomatic Prescription."

Wednesday Evening.

The Raue Medical Club of Central Pennsylvania will entertain the members of the Society and visitors at the Logan House.

Thursday, September 21.

Morning Session, 9:30 to 1 O'Clock.

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

G. H. Haas, M. D., Chairman.

Associates—Drs. C. H. Brown, H. K. Hoy, G. J. Palen, H. F. Schantz, I. G. Shallcross, W. W. Speakman, G. W. Stewart.

J. W. Stitzel, C. M. Thomas, H. B. Ware, H. S. Weaver.

G. H. Haas, M. D., Allentown, "Ophthalmia Neonatorum."

Discussion to be opened by Dr. W. W. Speakman.

C. H. Brown, M. D., Philadelphia, "The Ocular Symptoms of General Disease."

H. K. Hoy, M. D., Altoona, "Eye, Ear, Nose and Throat Experiences."

Discussion to be opened by Dr. J. W. Stitzel.

G. J. Palen, M. D., Philadelphia, "Chronic Suppurative Otitis Media and Its Treatment."

Discussion to be opened by Dr. H. S. Weaver.

H. F. Schantz, M. D., Reading, "Septal Spurs."

Discussion to be opened by Dr. H. B. Ware.

W. W. Speakman, M. D., Philadelphia, "Penetrating Wounds of the Eye."

Discussion to be opened by Dr. G. W. Stewart.

G. W. Stewart, M. D., Philadelphia, "Ocular Defects; Their Relation to Mental Backwardness in Children."

Discussion to be opened by Dr. H. K. Hoy.

J. W. Stitzel, M. D., Hollidaysburg, "A Plea for More Careful Differentiation of Nasal Diseases, With Illustrative Cases."

Discussion to be opened by Dr. I. G. Shallcross.

C. M. Thomas, M. D., Philadelphia, "The General Treatment of Ear Diseases."

SECTION OF OBSTETRICS.

J. W. Dehoff, M. D., Chairman.

Associates—Drs. S. G. A. Brown, Augustus Korndœrfer, Jr., W. C. Mercer.

J. W. Dehoff, M. D., York, "Criminal Abortion."

Augustus Korndœrfer, Jr., M. D., Philadelphia, "The Necessity for Accurate Diagnosis and Treatment of Occipito-Posterior Positions."

S. G. A. Brown, M. D., Shippensburg, "Puerperal Eclampsia."

W. C. Mercer, M. D., Philadelphia, "Puerperal Sepsis."

Afternoon Session, 3 to 6 O'Clock.

SECTION OF GYNÆCOLOGY.

T. L. Chase, M. D., Chairman.

Associates—Drs. B. F. Betts, N. S. Betts, C. M. Brooks, Millie J. Chapman, E. L. Clark, W. F. Edmundson, P. F. Felsberg, H. M. Gay, T. J. Gramm, J. E. James, D. C. Kline, N. F. Lane, A. A. Lindabury, Julia C. Loos, W. F. Marks, E. W. Mercer, W. A. Stewart, E. H. Van Deusen, A. W. Yale.

B. F. Betts, M. D., Philadelphia, "Indications for the Surgical Treatment of Fibroid Tumors of the Uterus."

N. S. Betts, M. D., Philadelphia, "The Pathology of Tuberculosis of the Female Genitalia."

E. L. Clark, M. D., Media, "Curettage of the Uterus."

N. M. Collins, M. D., Rochester, N. Y., "Retro-Displacements."

W. D. Culin, M. D., Philadelphia, "Extra-Uterine Pregnancy."

P. F. Felsberg, M. D., Philadelphia, "Ether's Effects in Abdominal and Pelvic Surgery."

H. M. Gay, M. D., Philadelphia, "Ectopic Pregnancy: Its Early Diagnosis."

T. J. Gramm, M. D., Philadelphia, "Citation of Two Cases of Cæsarian Section."

D. C. Kline, M. D., Reading, "The Homœopathic Remedy in Gynæcological Cases."

N. F. Lane, M. D., Philadelphia, "Cancer of the Uterus."

Julia C. Loos, M. D., Harrisburg, "Mammary Tumors Under Medical Treatment."

E. H. Van Deusen, M. D., Philadelphia, "Incomplete Abortion."

G. C. Webster, M. D., Media, "The Influence of Modern Civilization on the Female Pelvic Organs."

A. W. Yale, M. D., Philadelphia, "Contra-Indications for Curettage."

Conclusion of reports of Sections and discussions.

Final report of the Board of Censors.

Unfinished business.

New business.

Selection of place for next meeting.

Adjournment.

The Board of Censors reported having examined into the quali-

fications of the following applicants for membership, and they were thereupon, on motion, elected:

REPORT OF THE BOARD OF CENSORS.

John V. Allen, M. D., 4637 Frankford Ave., Philadelphia.
Russell B. Armor, M. D., Crafton.
F. E. Bamberger, M. D., Lebanon.
H. B. Barclay, M. D., Greensburg.
Walter C. Barker, M. D., 2043 Girard Ave., Philadelphia.
C. W. Bartine, M. D., 253 W. Hansberry Street, Philadelphia.
J. T. Biddle, M. D., 515 W. Main Street, Monongahela.
E. C. Blackburn, M. D., 1421 11th Ave., Altoona.
Daniel Bohn, M. D., 1021 Seventh Ave., Altoona.
P. L. Bolsinger, M. D., 533 Locust Street, Johnstown.
George W. Brose, M. D., 417 W. Market Street, York.
L. S. Brown, M. D., Smith Block, Pittsburg.
William C. Browne, M. D., Burnside.
J. M. Byer, M. D., Bustleton.
H. W. Champlin, M. D., Bloomsburg.
I. B. Chantler, M. D., 537 Beaver Street, Sewickley.
Walter C. Cheesman, M. D., 211 N. 52d Street, Philadelphia.
Daniel Christy, M. D., Millvale.
Joseph B. Clifford, M. D., McKeesport.
William D. Culin, M. D., 708 N. 40th Street, Philadelphia.
Reuben O. Diehl, Manheim.
Fullerton J. Douglas, M. D., 611 Penn Ave., Pittsburg.
C. B. Dreher, M. D., Tamaqua.
William Erwin, M. D., 4844 Cedar Ave., Philadelphia.
G. S. Fisher, M. D., Lebanon.
W. H. Follmer, M. D., Milton.
W. L. Franck, M. D., 173 W. Tabor Street, Olney.
Charles R. Fulmer, 1211 W. Allegheny Ave., Philadelphia.
Verner S. Gaggin, M. D., 5182 Liberty Ave., Pittsburg.
F. E. Gladwin, M. D., 2204 N. 17th Street, Philadelphia.
R. M. Greno, M. D., Arnold.
J. B. Griffith, M. D., Lewistown.
William B. Griggs, M. D., 1449 N. 10th Street, Philadelphia.
Samuel Hamilton, Jr., M. D., Homœopathic Hospital, Pittsburg.
A. E. Heimbach, M. D., Renovo.

J. M. Heimbach, M. D., Kane.
William B. Holcombe, M. D., 1509 Girard Ave., Philadelphia.
James Hollowell, M. D., Parkesburg.
G. M. Hoover, M. D., Lancaster.
James R. Humes, M. D., Hollidaysburg.
John H. Humes, M. D., Hollidaysburg.
Arthur F. P. Huston, M. D., 22 N. Diamond Street, W., Allegheny.
W. H. Huber, M. D., Edge Hill.
William C. Hunsicker, M. D., 130 N. 18th Street, Philadelphia.
J. E. Johnston, M. D., 7035 Hamilton Ave., Pittsburg.
A. B. Kauffman, M. D., Lancaster.
J. D. Keller, M. D., 139 Carlisle Street, Hanover.
H. D. Kessler, M. D., Altoona.
W. J. Kiefer, M. D., Lebanon.
Seth. W. Kistler, M. D., Nanticoke.
H. A. Klock, M. D., Mahanoy City.
Henry A. Lacy, M. D., 743 N. 17th Street, Philadelphia.
H. P. Leopold, M. D., 332 W. Chelton Ave., Philadelphia.
Edward C. Leslie, M. D., 5815 Penn Ave., Pittsburg.
George F. Levis, M. D., 1746 Orthodox Street, Philadelphia.
M. J. Locke, M. D., Bellefonte.
Demerest W. Longwell, M. D., Tioga.
S. S. Mann, M. D., Columbia.
Watson Marshall, M. D., 424 Shady Ave., Pittsburg.
Franklin F. Massey, M. D., Womelsdorf.
E. S. H. McCauley, Beaver.
Warren C. Mercer, M. D., 1705 Arch Street, Philadelphia.
Irwin D. Metzger, M. D., Tyrone.
Seth. S. Miller, M. D., Susquehanna.
W. W. Nuss, M. D., Wissinoming.
William Scott Piper, M. D., Clearfield.
George R. Reich, M. D., Marietta.
C. M. Rhodes, M. D., 914 N. 6th Street, Harrisburg.
F. L. Richards, M. D., Berwyn.
H. A. Roscoe, M. D., Diamond Bank Building, Pittsburg.
Henry D. Rosenberger, M. D., Manheim.
William F. Roth, M. D., Wilkesbarre.
H. H. Sanderson, M. D., Johnstown.
William F. Satchell, M. D., Freemansburg.

Herman H. Seip, M. D., 316 N. Highland Ave., Pittsburg.
W. C. Seitz, M. D., Glen Rock.
W. J. Sharbaugh, M. D., 607 24th Street, Altoona.
Chas. T. Shinn, M. D., 17 E. Penn Street, Norristown.
John A. Shower, M. D., 104 S. Beaver Street, York.
K. S. Simpson, M. D., Carnegie.
William Steele, Jr., M. D., 2319 N. Broad Street, Philadelphia.
Henry B. Strock, M. D., Bedford.
John C. Sutton, M. D., New Brighton.
G. P. Taylor, M. D., Columbia.
C. F. Tegtmeier, M. D., Conshohocken.
E. T. Tripp, M. D., 1046 Fifth Ave., Pittsburg.
J. C. Tripp, M. D., Warren Centre.
J. F. Waaser, M. D., E. Mauch Chunk.
G. Harlan Wells, M. D., 1623 Arch Street, Philadelphia.
C. I. Wendt, M. D., 117 S. Highland Ave., Pitsburg.
M. A. Wesner, M. D., 407 Franklin Street, Johnstown.
Olin A. Williams, M. D., Butler.
M. A. Wilson, M. D., 140 E. 8th Street, Erie.
H. C. Witmeyer, M. D., Lebanon.
J. H. Yeagley, M. D., 127 E. Market Street, York.
J. M. Yeagley, M. D., 144 N. Prince Street, Lancaster.

The resignations of F. A. Whitman, M. D., of Wilkes-Barre, and Claude R. Norton, M. D., of Philadelphia, from active membership were accepted.

The Treasurer, Ella D. Goff, M. D., presented the following:

REPORT OF THE TREASURER.

Altoona, Pa., September 18, 1905.

To the Board of Directors, Officers and Members of the Homœopathic Society of Pennsylvania:

Ladies and Gentlemen—I beg leave to submit herewith my annual report as Treasurer of your Society, as follows:

RECEIPTS.

1904.		
Sept. 19.	To balance	$1,488.05
1905.		
Sept. 18.	To annual dues collected	1 625.00
		$3,113.05

EXPENDITURES.

1904.				
Sept.	21.	By order, No. 30, to Ella D. Goff, Treasurer, for 500 stamped envelopes	$10.00	
"	21.	Printing envelopes and statement blanks	5.00	
"	21.	Travelling and hotel expenses	42.00	
				$57.00
"	21.	By order, No. 31, to E. M. Gramm, Corresponding Secretary, for Polk's Medical Directory	$6.00	
"	21.	Printing 1,200 postals and 3,500 envelopes	14.38	
				20.38
"	27.	By order, No. 32, to The Examiner, for printing application blanks and programs		29.25
Oct.	11.	By order, No. 33, to Wm. M. Clift, for reporting annual meeting, 1904		100.00
Sept.	21.	By order, No. 34, to E. M. Gramm, for services of stenographer, transactions of session of 1904		50.00
"	21.	By order, No. 35, to E. M. Gramm, for postage, addressing and mailing President's letter, 5, 7, '04	$26.32	
"	21.	Do. postal card notice, 7, 9, '04	14.00	
"	21.	Do. programs, 8 30, '04	28.14	
"	21.	Postage and incidentals from 9, 28, '03, to 9, 20, '04	34.43	
"	21.	Travelling and hotel expenses	15.00	
				117.89
"	21.	By order, No. 36, to Geo. B. Moreland, Recording Secretary, for travelling expenses		42.00
Dec.	2.	By order, No. 37, to E. M. Gramm, for electrotyping		14.75
1905.				
Feb.	17.	By order, No. 40, to the Hahnemann Monthly for one-half cost of half-tone plates of Drs. Van Lennep and Chase articles		14.40

"	18.	By order, No. 41, to The Examiner for printing and mailing transactions		767.36
June	21.	By order, No. 42, to The Examiner for printing circulars and application blanks.....		11.25
"	21.	By order, No. 43, to Van Fleet & Son, for printing postals and envelopes		6.50
Aug.	9.	By order, No. 44, to Ella D. Goff, Treasurer, for 500 stamped envelopes	$10.60	
"	9.	Printing same and statement blanks.	3.00	
				13.60
		Total		$1,244.98

RECAPITULATION.

Total receipts	$3,113.05
Total expenditures	1,244.98
Balance on hand September 18, 1905	$1.868.07

Respectfully submitted,

ELLA D. GOFF, M. D.,
Treasurer.

Pittsburg, Pa., September 18, 1905.

REPORT OF THE COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Organization, Registration and Statistics presents its annual report for publication. A list of the local societies and of the hospitals and dispensaries under our control is given, and a detailed statement of data obtainable concerning them is placed at your disposal.

We would suggest in reference to local societies that an added interest would be given to their work and a closer relationship formed among the homœopathic profession of the State, if, at intervals during the year, they invited well known men, not members of their own society, to be present at their meetings and present papers or participate in the discussions.

We would also suggest that more attention be paid to the relationship that should exist between the local societies and the State societies, and that we, as a State Society, should interest ourselves in the formation and the progress of local societies in every county or locality where two or three or more be gathered together.

Our hospitals and dispensaries, as will be noticed in the report, continue to do good work. Hahnemann Hospital, of Philadelphia, has added to its facilities during the past year, and the Homœopathic Hospital, of Pittsburg, has acquired 5½ acres of ground and has accepted plans for the erection of a new hospital estimated to cost $700,000.00.

We desire through the medium of this report to thank all who have answered our requests for information.

Respectfully submitted,

GEO. B. MORELAND, M. D.,
Chairman.

HOMŒOPATHIC MEDICAL SOCIETIES

NAME.	PRESIDENT.
Lehigh Valley Homœopathic Medical Society.	E. D. Doolittle, M. D., Easton.
Homœopathic Society of Northeastern Pennsylvania.	Anna C. Clarke, M. D., Scranton.
Homœopathic Medical Society of Philadelphia County.	John J. Tuller, M. D., Philadelphia.
Homœopathic Medical Society of Allegheny County.	Ella D. Goff, M. D., Allegheny.
Homœopathic Medical Society of the 23rd Ward, Philadelphia.	C. E. Tegtmeier, M. D., Philadelphia.
Homœopathic Medical Society of Schuylkill County.	Ellwood K. Steckel, M. D., Orwigsburg.
Alumni of Hahnemann Medical College of Philadelphia.	Geo. T. Stuart, M. D., New York.
Homœopathic Medical Society of Beaver County.	T. L. Blackledge, M. D., New Brighton.
Germantown Homœopathic Medical Society of Philadelphia.	Jas. H Closson, M. D,, Philadelphia.
Hahnemann Club of Philadelphia.	O. S. Haines, M. D., Philadelphia.
Oxford Medical Club of Philadelphia.	F. Wilcox, M. D., Philadelphia.
Woman's Homœopathic Medical Club of Philadelphia.	Julia G. Waylan, M. D., Philadelphia.
Bœnninghausen Medical Club of Philadelphia.	T. P. Gittens, M. D., Philadelphia.
Homœopathic Practitioners' Association of Reading.	F. E. Howell, M. D., Reading.
A. R. Thomas Club of Philadelphia.	Fred. P. Wilcox, M. D., Philadelphia.
Saturday Night Club of Microscopists.	Joseph C. Guernsey, M. D., Philadelphia.
Philadelphia Clinical Society.	Chas. M. Thomas, M. D., Philadelphia.
Philadelphia Medical Club.	P. Sharples Hall, M. D., Philadelphia.
East End Doctors' Club.	J. H. McClelland, M. D., Pittsburgh.
Homœopathic Pharmaceutical Association of Pennsylvania.	F. J. Slough, M. D., Allentown.
Homœopathic Medical Society of Delaware County.	Isaac Crowther, M. D., Chester.
Homœopathic Medical Society of Chester County.	B. G. Arnold, M. D., Downingtown.
Homœopathic Medical Society of Luzerne County.	J. A. Bullard, M. D., Wilkes-Barre.
Homœopathic Medical Society of Lackawanna County.	H. F. Heilner, M. D., Scranton.
Philadelphia Medical and Surgical Society.	L. T. Ashcraft, M. D., Philadelphia.

OF THE STATE OF PENNSYLVANIA.

Secretary.	Organized.	Incorporated.	Meetings.	Number of Members.	Dues.
A. J. Bittner, M. D., Allentown.	1881	Not.	Bi-Monthly.	30	$1.00
Theo. M. Johnson, M. D., Pittston.	1882	"	Semi-Annually.	26	2.00
O. B. Wait, M. D., 1230 S. 57th St., Phila.	1866	"	Monthly.	250	1.00
H. S. Nicholson, M. D., Empire Building, Pittsburg.	1864	"	"	80	2.00
John D. Boileau, M. D., 804 Lehigh Ave., Phila.	1881	"	"	30	1.00
E. H. Maurer, M. D., Ashland.	1882	"	Quarterly.	26	1.00
W. D. Carter, M. D., 1315 S. Broad St., Phila.	1857	"	Annually.	1610	1.00
Wm. Raymer, M. D,, Beaver Falls.	1883	"	Monthly.	12	1.00
L. W. Thompson, M. D., 1701 Green St., Phila.	1883	"	"	101	1.00
T. S. Dunning, M. D., 1328 N. 15th St., Phila.	1872	"	"	10	None.
C. W. Simmons, M. D., 1628 N. 18th St., Phila.	1885	"	"	18	2.00
Margaret C. Lewis, M. D., Philadelphia.	1883	"	"		None.
Geo. W. Smith, M. D., Philadelphia.	1877	"	"	9	None.
Margaret Hassler-Schantz, M.D., 402 N. 5th St., Reading.	1896	"	"	15	1.00
A. A. Norris, M. D., 4818 Chester Ave., Phila.	1888	"	"	20	None.
Wm. F. Baker, M. D., Philadelphia.	1899	"	"	70	2.00
Joseph C. Guernsey, M. D., 1923 Chestnut St., Phila.	1880	"	"	8	None.
Edwin H. Van Deusen, M. D., 2101 Tioga St., Phila.	1882	"	"	12	None.
C. I. Wendt, M. D., Pittsburgh.	1895	"	"	18	1.00
E. P. Anschutz, M. D., Philadelphia.	1881	1881	At Call of President.	13	None
Geo. C. Webster, M. D., Chester.	1898	Not.	Monthly.	21	1.00
L. Hoopes, M. D., Chester.	1898	"	"	18	1.00
C. C. Thompson, M. D., South Main St., Wilkes-Barre.	1901	"	"	16	None.
Geo. M. DeWitt, M. D., Scranton.	1900	"	"	15	None.
Geo. H. Bickley, M. D., Philadelphia.	1900	"	"	20	None.

HOMŒOPATHIC MEDICAL SOCIETIES

NAME.	PRESIDENT.
Women's Homœopathic Medical Association of Pittsburgh.	M. J. Chapman, M. D., Pittsburgh.
Organon Medical Club of Chester.	R. P. Mercer, M. D., Chester.
The Van Lennep Clinical Club.	J. J. Tuller, M. D., Philadelphia.
Goodno Homœopathic Medical Society.	James Yeagley, M. D., Lancaster.
The Homœopathic Medical Society of Delaware, Chester and Montgomery Counties.	A. F. Heritage, M. D., Jenkintown.
The Homœopathic Medical Society of Lebanon County.	M. B. Gerberich, M. D., Lebanon.
Raue Medical Club of Central Pennsylvania.	R. L. Piper, M. D., Tyrone.
Homœopathic Medical Society of Erie County.	

OF THE STATE OF PENNSYLVANIA.

Secretary.	Organized.	Incorporated.	Meetings.	Number of Members.	Dues.
Ella D. Goff, M. D., Allegheny.	1899	Not.	Monthly.	8	$1.00
D. P. Maddux, M. D., Chester.	1887	"	"	15	None.
Arthur Hartley, M. D., Philadelphia.	1895	"	"	20	2.00
E. T. Prizer, M. D., Lancaster.	1899	"	Quarterly.	35	1.00
Isaac Crowther, M. D., 800 Madison St., Chester.	1858	"	Bi-Monthly.	71	1.00
F. E. Bamberger, M. D., Lebanon.	1904	"	Monthly.	15	1.00
A. L. Baker, M. D., 1400 12th Ave., Altoona.	1896	"	"	16	2.00

HOMŒOPATHIC DISPENSARIES

NAME.	SECRETARY.	LOCATION.
General Dispensary of the Pittsburgh Homœopathic Hospital.	D. G. Stewart.	Pittsburgh.
Eye and Ear Dispensary of the Pittsburgh Homœopathic Hospital.	D. G. Stewart.	Pittsburgh.
Hahnemann Medical College Hospital Dispensary of Philadelphia.	Chas. Mohr, M. D.	Philadelphia.
Children's Homœopathic Hospital Dispensary.	Walter Strong, M. D.	Philadelphia.
Hahnemann Hospital Dispensary.	Miss E. K. Richmond.	Scranton.
Homœopathic Dispensary of Reading.	Chas. M. Richards, M. D.	Reading.
Dispensary Women's Homœopathic Association of Pennsylvania.	Mrs. F. B. Skinner.	Philadelphia.
*St. Luke's Homœopathic Hospital.	T. H Carmichael, M. D	Philadelphia.

*Report for year incomplete owing to removal.

HOMŒOPATHIC HOSPITALS

NAME.	LOCATION.	SECRETARY OR EXECUTIVE OFFICER	Incorporated.	Opened to Patients.
Medical, Surgical and Maternity Hospitals of the Women's Homœopathic Association of Pennsylvania.	Philadelphia.	Mrs. F. B. Skinner.	1882	1882
Children's Homœopathic Hospital.	Philadelphia.	Walter Strong, M. D.	1877	1877
Homœopathic Medical and Surgical Hospital.	Pittsburgh.	D. G. Stewart.	1866	1866
Hahnemann Medical College Hospital.	Philadelphia.	Chas. Mohr, M. D.	1848	1869
Hahnemann Hospital.	Scranton.	Miss E. K. Richmond	1897	1897
Homœopathic Medical and Surgical Hospital.	Reading.	W. W. Light.	1890	1891
Woman's Southern Homœopathic Hospital of Philadelphia.	Philadelphia.	Annie M. Miller.	1896	1896
St. Luke's Homœopathic Hospital.	Philadelphia.	Miss M. E. Lewars.	1896	1896
*Beaver Valley General Hospital.	New Brighton.	J. F. Merriman.	1894	1895
J. Lewis Crozer Home and Homœopathic Hospital.	Chester.	Miss S. Katharine Ubie.		

*Staff composed of homœopathic and allopathic physicians.

OF THE STATE OF PENNSYLVANIA.

Incorporated.	Opened.	No. of New Patients Last Year.	Treated Last Year.	Prescriptions Last Year.	Out Visits.
1866	1866	3,361	13,196	11,151	None.
1866	1866	. . . .	4,948	. . . .	None.
1848	1848	31,915	31,915	136,411	2,800
1877	1877	7,588	7,588	22,454	956
1897	1897	213	213	558	49
1890	1888	1,485	1,485	5,173	50
1882	1884	4,488	4,488	7,010	117
1896	1896	475	2,329	4,061	None.

OF THE STATE OF PENNSYLVANIA.

No. of Beds.	Treated Last Year.	Cured.	Relieved.	Not Relieved.	Died.	Estimated Value of Property and Grounds.	Source of Income.
80	997	867	33	.	41	$250,000.00	State aid. Donations.
130	696	486	47	1	117	210,000.00	State aid. Donations
140	3,015	2,557	193	31	140	400,000.00	State aid Donations.
140	1,970	1,637	163	37	133	1,080,000.00	State aid. Donations.
21	384	264	72	15	33	Rented.	State aid. Donations.
22	246	180	50	1	15	36,000.00	State aid. Donations.
30	270	189	55	10	16	25,000.00	State aid. Donations.
26	17 312	13	1	.	3	56,000.00	State aid. Donations. State aid. Donations.

On motion, the report of the Committee on Organization, Registration and Statistics was accepted, ordered printed in the Transactions, and also referred to the Committee on President's Address.

The Legislative Committee, D. P. Maddux, M. D., Chairman, submitted its report. On motion, the report was received by the Society, and certain parts of it, referring to patent medicines and proprietary drugs, referred to the Committee on President's Address.

REPORT OF THE COMMITTEE ON LEGISLATION.

The Legislative Committee of the Homœopathic Medical Society of the State of Pennsylvania submit the following as their report:

At a meeting of the Legislative Committee of the Homœopathic Medical Society of the State of Pennsylvania, held in Hahnemann Medical College, Philadelphia, February 27, 1903, of which due notice was sent to all the members of the Legislative Committee, the following resolution was unanimously adopted:

"That a sub-committee of five be appointed, to be called the 'Executive Board of the Legislative Committee' of the Homœopathic Medical Society of Pennsylvania, whose chairman shall be the chairman of the Committee on Legislation, the functions of the Executive Board to be the watching of legislation affecting the Homœopathic medical profession, and to perform such duties of the Legislative Committee as can be done without calling a meeting of the full Committee."

The Chairman of the Committee appointed the following:

Drs. E. M. Gramm, C. S. Middleton, J. D. Boileau, of Philadelphia; D. C. Kline (Reading), R. P. Mercer (Chester), who, together with Dr. D. P. Maddux, Chairman of the Committee and the President of the State Society, make seven members of the Executive Board of the Committee.

Since then but one other meeting of the full committee on legislation has been held (December 20, 1904).

The members of the Committee are scattered throughout the State, making it almost impossible to get them together. The full Committee, has been called on, however, to aid the Executive Board whenever their help was needed.

At the last annual meeting of the Homœopathic Medical So-

ciety of the State of Pennsylvania, held at Easton, September, 1904, the following measures were referred to the Legislative Committee for action, and at a meeting of the full Committee on Legislation, held in Hahnemann Medical College, Philadelphia, December 20, 1904, referred to the Executive Board of the Committee on Legislation for final action—

1. The report of the Committee on Examination of Medical Students.

2. The enactment of laws by the Legislature of the State of Pennsylvania providing for the registration of vital statistics, and providing for health officers in rural districts, and the extension of the powers of the State Board of Health over the water supply of the State, and such measures as may be necessary to limit the ravages of preventable diseases.

3. The request of the Pennsylvania State Nurses' Association requesting the support of the Homœopathic Medical Society of Pennsylvania in the matter of registration of nurses in the State.

The Executive Board of the Legislative Committee acted on all these matters.

In the matter of the examination of students, after consulting with the Homœopathic Board of Medical Examiners and others, decided to offer no bill regulating the matter, but rather to endorse and aid the passage of such a bill if introduced by the Medical Council.

The bill introduced by Mr. Hoke in February 23, 1905, and amended on third reading April 4, 1905, known as House bill 205, incorporated the alterations suggested to the "Medical Council Act" at the last session of our Society. With the possible exception of providing for a final examination in Materia Medica at the close of the second year at medical college, this bill, as modified, received the cordial endorsement of your Committee, and we regret to say was vetoed by the Governor solely on account of the last four lines in Section 14, which provided for possible imprisonment as well as fine for the violation of the act. The suggested amendment was inserted with the view of driving out of our State these flagrant malpractitioners and abortionists, who would not be deterred from following their nefarious practice by the imposition of a fine.

Senate bill, No. 72, introduced by Mr. Cummings, and which passed both Houses, and by the signature of the Governor became

a law (Act. No. 221), provided for the registration of births and deaths, and enlarged the scope and increased the efficiency of the State Board of Health, and we believe will result in making the vital statistics of our State of some real value.

This bill was supplemented by Act. No. 218, creating a department of health, and by Act. No. 219, establishing an emergency fund of $50,000 to be controlled by the State Board of Health for the prevention and suppression of epidemics, vastly increases the efficiency of the State Board of Health, and places it on a more secure and scientific basis.

House bill, No. 61, introduced by Mr. Henderson on January 25, provided for the registration of nurses and the establishment of a State Board of Examiners therewith.

This bill passed the House, but some of its features were considered too drastic by the Senate, where it died in the committee.

Senate bill, No. 115, introduced by Mr. Fox, and intended to regulate and legalize the practice of osteopathy in Pennsylvania, was a measure containing many pernicious features, and while ostensibly providing for a sufficient medical (?) requirement, yet was not surrounded by the safeguards and guarantees that are attendant upon the act establishing the Medical Council; at the same time it conferred upon the so-called osteopathic board privileges and powers not enjoyed by the other board.

Your Committee opposed this bill but it was passed by both Houses, and doubtless would have become a law had not your Committee, in co-operation with other committees, appeared before the Governor and induced him to veto it. At the next session of the Legislature a similar measure will unquestionably be introduced again, and the same battle will have to be fought again.

The attitude which your Committee assumed before the recent Legislature in matters affecting medical education was that our school of medicine had no special favors to ask; indeed, it desired that the standards of medical education be placed as high as possible.

We insisted that a candidate's preliminary requirements and his fundamental medical education be as broad, liberal and thorough as attainable, only reserving the right to a final examination in therapeutics and Materia Medica by a board in consonance with the teaching of the college of his graduation.

A matter which was earnestly considered by your Committee

was the urgent need of proper restriction in the sale of those patent and proprietary medicines containing the drugs that enslave.

The law surrounds the direct sale of alcohol and narcotics with some restrictive safeguards, but permits, in effect, alcohol, cocaine and morphia and other drugs to be sold in preparations advertised as harmless.

All physicians of observation and experience can bear witness to numerous instances of patients who acquire a confirmed and enslaving habit from the use of patent medicines advertised as harmless.

It is time that the Legislature and community at large were aroused to the extent and perniciousness of these practices, and suitable laws drawn to abate, if not abolish, this evil. We fully recognize that a proper law would meet the opposition of a powerful and wealthy body of the venders of these drugs. We are cognizant of the difficulty of framing a law which would be competent to correct this evil; but when the State thinks it necessary to reexamine the individual physician after receiving a diploma from a medical college under its own supervision, it should be necessary to further restrict those wholesale practitioners of medicine, who, under the guise of selling helpful and harmless medicines, are selling preparations containing dangerous and enslaving drugs, which the spirit of the law assumes can only be dispensed upon the direct prescription of a legalized practitioner of medicine.

The expenses thus far incurred by your Committee have been $116.00, for which proper vouchers are offered.

The Publication Committee, E. M. Gramm, M. D., Chairman, reported that the Transactions for 1904, consisting of 496 pages of printed matter and eighteen illustrations, had been published and delivered to all members who had paid their dues. He urged that the papers be properly prepared and presented to the Publication Committee at once, and in that event promised to have the Transactions issued promptly. On motion, this report was accepted with the thanks of the Society.

The Special Membership Committee reported that it had travelled all over the State and had met with considerable success in its efforts, as the number of applicants for membership would indicate. The Committee recommended that the Society take action on delinquent dues and remit all dues up to January 1, 1905. On motion, report was received with the thanks of the Society.

The Press Committee, Dr. H. F. Schantz, Chairman, reported that such matters as came under its jurisdiction had been attended to. On motion report was received with the thanks of the Society.

The delegates to the Interstate Committee of the American Institute of Homœopathy presented the following:

REPORT OF THE DELEGATES TO THE INTERSTATE COMMITTEE OF THE AMERICAN INSTITUTE OF HOMŒOPATHY.

At the last meeting of the American Institute of Homœopathy, held in Chicago, the following By-Law was adopted, and is now in force:

The Interstate Committee shall consist of two members from each State to be appointed by the respective State societies; provided such appointees are members of the Institute. Said delegates shall be appointed for a term of four years, and shall hold office until their successors have been appointed. Each State shall also appoint one or more alternates.

The officers of the Interstate Committee shall consist of a chairman and secretary, to be elected annually by the Committee. The duties of the Interstate Committee shall be as follows: First. To guard, foster and promote the interests of Homœopathy, and to render assistance wherever and whenever it is needed. Second. This Committee shall, through its secretary, inform the secretaries of all Homœopathic societies and institutions of the existence and purposes of this Committee. Third. This Committee shall furnish all State societies blank forms of credentials for certifying delegates to this Committee. Fourth. This Committee shall furnish all State societies blank forms upon which the delegates to this Committee shall furnish written annual reports. Fifth. The duties of the delegates shall be defined by this Committee.

In order to meet the requirements of the above enactment your delegates to the Interstate Committee recommend the adoption of the following amendments to the By-Laws of this Society, viz.:

Under Article IX.—Standing Committee—

An Interstate Committee of the American Institute of Homœopathy to consist of two members of this Society who shall also be members of the American Institute of Homœopathy, and serve for

a term of four years, and two alternates who shall also serve for four years.

B. Frank Betts, M. D.,
F. W. Boyer, M. D.,
Delegates.

Chandler Weaver, M. D., of Fox Chase, presented the

REPORT OF THE NECROLOGIST.

WILLIAM H. BIGLER, A. M., M. D.

Professor Wm. H. Bigler, a son of Bishop David Bigler, D. D., of the Moravian Church, was born June 10, 1840. His boyhood days were spent in New York, where his father was a pastor. He graduated from the Moravian College and Seminary at Bethlehem, Pa. He then spent two years in Europe at the universities of Berlin and Erlangen. Upon his return he was appointed to a professorship in his Alma Mater, which position he held for eight years. He then began the study of medicine, and graduated from the Hahnemann Medical College of Philadelphia in 1871. He immediately entered the dispensary service, and was continuously connected with the college in some capacity until his death.

In 1890 he was appointed Associate Professor of Physiology, and in 1891 was elected a full professor of that branch. Later, upon the resignation of Dr. B. F. Betts, the lectureship of pædiatrics was added to his chair. In both these departments he proved the same cheerful, enthusiastic and successful worker that has characterized him in every position to which he has been called. In 1875 he was one of the editors of the *American Journal of Homœopathic Materia Medica*. In 1896 he became associated with the editorial staff of the *Hahnemannian Monthly*, and continued upon it until he ceased to work and live

He was the author of Bigler's Syllabus on Physiology and many articles to societies and journals.

He believed in the benefits derived from association with members of his profession. He was a member of the Homœopathic Medical Society of Philadelphia. In 1872 only one year after graduating he joined our State Society. In 1876 joined the American Institute of Homœopathy; a member of the Senate of Seniors since 1901. He was a member of the Philadelphia Clinical Club, one of the organizers of Hahnemann College Alumni Association.

He married the daughter of Dr. Augustus W. Koch. There were born to them five children. There survive him a widow, one daughter, Mrs. D. P. Moses, of New York, and one son, Dr. Bernard E. Bigler, now of Colorado Springs, who died the following February 20th.

Death came very suddenly on December 10, 1904. In the afternoon he attended a special meeting of the Hahnemann College faculty, and was apparently well, happy and in his most genial mood. Upon its adjournment at 3:30 o'clock, he started down Broad street, and in a few minutes fell to the pavement on Walnut street below Broad. Those near ran to his assistance, thinking he had slipped upon the ice, but found him dead.

FRANK E. YERKES, M. D.

Dr. Frank E. Yerkes was born near Hatboro, on January 9, 1870. He graduated from the Hatboro High School, after which he attended and graduated from the West Chester State Normal School. He graduated from the Hahnemann Medical College of Philadelphia, year of 1884. He joined our State Society last year. He belonged to the 23d Ward Homœopathic Medical Society and the Tri-County Homœopathic Society. He was a member of the Odd Fellows and of the order of the Knights of the Mystic Chain. He died on December 22, 1904; erysipelas followed by septic pneumonia. Survive him a widow and a small son, Harmon A. Yerkes.

Within the past year we have lost three of our numbers to my knowledge. One was suddenly taken after a life spent in doing deeds of mercy to the Great Physician's creatures here in this world. We feel his loss keenly, for, while he was as one who served, still he was a valuable man as a teacher and writer. Most of us have received information from his lips or his pen. We deeply regret the loss of young members, for we feel that theirs may have been a very bright career, but we must all bow the head to the inevitable. Their Master had other work for them to do. Farewell!

CHANDLER WEAVER, M. D.,
Necrologist.

SUMMARY.

1872—Dr. William H. Bigler, A. M., M. D., Philadelphia, Pa., died December 10, 1904

1904—Dr. Frank E. Yerkes, Ambler Pa., died December 22, 1904.

1903—Dr. Bernard E. Bigler, Colorado Springs, died February 20, 1905.

On motion, the amendment to Section 2, Article IV, was carried, so that the Section now reads:

"Section 2. The nomination for officers of the Society shall be the special order of business for eleven o'clock on the morning of the second day the annual meeting. The officers shall be elected by ballot, the election to be the special order of business for eleven o'clock on the morning of the third day of the annual meeting. The candidate receiving a majority of votes cast shall be declared elected. The officers elected shall enter upon their respective duties on the first day of January next succeeding their election, to serve for the term of one year, or until their successors are elected, except as hereinbefore provided."

The amendment to Section 3, Article III, was adopted after changing the words "Board of Trustees" to "Board of Censors," and eliminating the words "by his superior attainments," so that the Section now reads:

"Section 3. Any Homœopathic physician, not a resident of Pennsylvania, who may be judged worthy, may, by a two-thirds vote of the members present, be elected an honorary member at any annual meeting; provided, that the proposal for honorary membership shall have been made at a previous annual meeting, and said proposal been approved by the Board of Censors; but no more than two shall be elected in one year. Honorary members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues."

The amendment to Article I, Article V, was lost.

The amendment to Article IX was adopted so that the Article now reads: "The following committees shall be appointed by the President on assuming office:

"A Committee on Legislation, which shall serve two years, of at least nine members, to be appointed by the President in alternate years, whose duty it shall be to give special attention to all legislation involving the interests of the Society."

The remainder of the Article remains unchanged.

The amendment to Article VII was adopted, so that it now reads:

Article VII., Dues. Section 1. Active members shall pay the sum of five dollars upon their election.

Sec. 2. Active members shall pay annually, in advance, the sum of three dollars toward defraying the expenses of the Society. Any member who shall fail to pay his annual dues for three successive years shall be dropped from the roll of members, after having been notified by the Corresponding Secretary of the forfeiture of his membership. The published proceedings of the Society will be furnished only to those members who are not in arrears for dues.

The following letter was received:

Altoona, Pa., September 20, 1905.

The President of the Homœopathic Medical Society of the State of Pennsylvania:

Dear Doctor—I have the pleasure, on behalf of the staff of the Altoona Hospital, to extend to you and the members of your Society, cordial invitation to visit our hospital at your convenience, severally or as a body.

Very respectfully,

WM. S. ROSS, M. D.,

Secretary Hospital Staff.

On motion, the invitation was accepted, and the Secretary directed to acknowledge the receipt of the invitation, and thank the hospital staff for the fraternal courtesy extended.

The Board of Trustees, through its Secretary, I. B. Gilbert, M. D., reported that four meetings had been held during the year, and that the routine business of the Society coming under the jurisdiction of the Board had been transacted.

The Tellers appointed to conduct the election of officers were Drs. H. F. Schantz and E. C. Blackburn.

The election resulted in the selection of the following officers:

President, C. P. Seip, M. D., Pittsburg.

First Vice-President, T. J. Gramm, M. D., Philadelphia.

Second Vice-President, Anna D. Varner, M. D., Wilkinsburg.

Recording Secretary, George B. Moreland, M. D., Pittsburg.

Corresponding Secretary, Edward M. Gramm, M. D., Philadelphia.

Treasurer, Ella D. Goff, M. D., Allegheny.

Necrologist, Chandler Weaver, M. D., Philadelphia.

Censor, George W. Smith, M. D., Philadelphia.

Trustees, C. P. Seip, M. D., Pittsburg; O. S. Haines, M. D., Philadelphia; D. P. Maddux, M. D., Chester.

On motion the Society decided to hold the business session of the next annual meeting in Philadelphia, the time and place to be determined by the Board of Trustees. The scientific sessions are to be merged with those of the American Institute of Homœopathy and the International Homœopathic Congress at Atlantic City in September, 1906, and the Trustees were directed to attend to all matters connected with the meeting.

Dr. T. J. Gramm introduced the following resolution:

Resolved, That the Trustees be instructed to take the necessary means of applying the distinction, mark or title to the Seniors of the State Society similar to those in the American Institute of Homœopathy, and report at the annual meeting of the Society in 1906.

On motion, the President, William A. Seibert, M. D., was given the thanks of the Society for the indefatigable manner in which he had worked for the benefit of the Society, and for the impartial and able way he had presided at the sessions.

The Raue Medical Club of Central Pennsylvania was thanked for the courtesies extended by it, and for the hospitable way they had entertained the State Society.

The Ladies' Auxiliary of the Raue Club was congratulated on the entertainment they had provided, and the hearty thanks of the Society were extened them as an indication of the feeling entertained by the Society for their efforts.

The officials in charge of the Pennsylvania Railroad car shops were given the thanks of the Society for their kindness in connection with visits of the members of the Society to the shops.

The Superintendent of the Logan House was thanked for courtesies in connection with the reception given there.

The local and Associated Press were thanked for the very full and complete accounts of the meetings published in the various papers.

By direction of the Society contained in a vote taken on the recommendation of the Committee on President's Address, the following addition to Article IX of the By-Laws will come up for consideration at the next annual meeting: Add after the clause in reference to the Publication Committee the following: "A Committee on Membership and Organization to consist of six members

who shall serve for two years, three members to be appointed each year. It shall be the duty of this Committee to aid in obtaining new members for the Society; to urge attendance at the annual meetings, and to promote the organization of county and other local societies, so that fraternal and close professional relationship of the members of the Homœopathic medical profession may be furthered."

The Delegates to the Interstate Committee of the American Institute of Homœopathy offered the following amendment to Article IX. of the By-Laws: Amend Article IX. by adding to it "A Committee delegated to serve on the Interstate Committee of the American Institute of Homœopathy to consist of two members of this Society who shall also be members of the American Institute of Homœopathy, to serve for a term of four years; and two alternates who shall also serve for four years and who shall also be members of this Society and of the American Institute of Homœopathy.

DELEGATES AND COMMITTEES.

Delegate to the American Institute of Homœopathy.—Dr. J. H. McClelland; Alternate, Dr. Edward Cranch.

Delegates to the Interstate Committee of the American Institute of Homœopathy.—Drs. B. F. Betts and F. W. Boyer.

Committee on Legislation.—D. P. Maddux, M. D., Chairman; Associates, Drs. J. D. Boileau, H. M. Bunting, T. H. Carmichael, Anna C. Clarke, Isaac Crowther, W. G. Dietz, E. M. Gramm, E. R. Gregg, T. M. Johnson, W. H. Keim, D. C. Kline, Aug. Korndœrfer, Sr., J. H. McClelland, R. P. Mercer, C. S. Middleton, S. B. Moon, G. B. Moreland, G. A. Mueller, E. C. Parsons, R. L. Piper, E. T. Prizer, F. J. Slough, W. B. Van Lennep, H. B. Ware, Julia G. Wayland, L. H. Willard.

Committee on Organization, Registration and Statistics.—G. B. Moreland, M. D., Chairman; Associates, Drs. C. F. Bingaman, E. M. Gramm.

Committee on Publication.—E. M. Gramm, M. D., Chairman; Associates, Drs. Ella D. Goff, G. B. Moreland.

Press Committee.—H. F. Schantz, M. D., Chairman; Associates, Drs. L. H. Willard, R. L. Piper.

Membership Committee.—E. M. Gramm, M. D., Chairman; Associates, Drs. H. F. Schantz, R. L. Piper, J. D. Boileau, D. C. Kline.

CHARTER OF THE HOMŒOPATHIC MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

To the Honorable, the Judges of the Court of Common Pleas of Philadelphia County, Pennsylvania:

In compliance with the requirements of an Act of the General Assembly of the Commonwealth of Pennsylvania, entitled "An Act to provide for the Incorporation and Regulation of Certain Corporations," approved the twenty-ninth day of April, A. D. 1874, and the supplements thereto, the undersigned, all of whom are citizens of Pennsylvania, having associated themselves together, with others hereinafter named, for the purpose hereinafter specified, and desiring that they may be incorporated according to law, do hereby certify:

First, The name of the proposed Corporation is The Homœopathic Medical Society of the State of Pennsylvania.

Second, The said Corporation is formed for the purpose of organizing the Homœopathic Medical Profession in the State of Pennsylvania and advancing Medical Sciences.

Third, The business of said Corporation is to be transacted in the City of Philadelphia.

Fourth, The said Corporation is to exist perpetually.

Fifth, The names and residences of the Corporators are as follows: William W. Van Baun, M. D., Philadelphia; John F. Cooper, M. D., Allegheny; Edward M. Gramm, M. D., Philadelphia; Z. T. Miller, M. D., Pittsburg; William B. Van Lennep, M. D., Philadelphia; Edward Cranch, M. D., Erie; Augustus Korndœrfer, Sr., M. D., Philadelphia; Alonzo P. Bowie, M. D., Uniontown; Clarence Bartlett, M. D., Philadelphia; Hugh Pitcairn, M. D., Harrisburg; Pemberton Dudley, M. D., Philadelphia; L. H. Willard, M. D., Allegheny; William C. Goodno, M. D., Philadelphia; Daniel P. Maddux, M. D., Chester; J. N. Mitchell, M. D., Philadelphia; Horace B. Ware, M. D., Scranton; William H. Keim, M. D., Philadelphia; W. A. Seibert, M. D., Easton; Charles M. Thomas, M. D., Philadelphia; J. H. McClelland, M. D., Pittsburg; John E. James, M. D., Philadelphia; Joseph E. Jones, M. D., West Chester; Isaac G. Smedley, M. D., Philadelphia; H. C. Chisholm, M. D., Huntingdon; T. H. Carmichael, M. D., Philadelphia, all of the State of Pennsylvania.

Sixth. The number of Trustees of said Corporation is fixed at nine, and the names and residences of those who are chosen as Trustees until the next annual election are as follows: William W. Van Baun, M. D., Philadelphia; John F. Cooper, M. D., Allegheny; E. M. Gramm, M. D., Philadelphia; Z. T. Miller, M. D., Pittsburg; William B Van Lennep, M. D., Philadelphia; Edward Cranch, M. D., Erie; William H. Keim, M. D., Philadelphia; J. N. Mitchell, M. D., Philadelphia; Daniel P. Maddux, M. D., Chester.

Seventh. At the next annual election for Trustees of the Corporation three Trustees shall be elected to serve for the term of one year, three others to serve for the term of two years, and three others to serve for the term of three years, and thereafter annually three Trustees shall be elected to serve for the term of three years in the place of those whose terms expire.

Witness our hands and seals this third day of November, A. D. eighteen hundred and ninety-six.

WILLIAM W. VAN BAUN, M. D. [L. S.],
WILLIAM B. VAN LENNEP, M. D. [L. S.],
CLARENCE BARTLETT, M. D. [L. S.],
W. C. GOODNO, M. D. [L. S.],
J. NICHOLAS MITCHELL, M. D. [L. S].

COMMONWEALTH OF PENNSYLVANIA, COUNTY OF PHILADELPHIA, *ss.*

Before me, the subscriber, a Notary Public for the Commonwealth of Pennsylvania, residing in the City of Philadelphia, personally appeared Wm. W. Van Baun, M. D., Wm. B. Van Lennep, M. D., and Clarence Bartlett, M. D., three of the subscribers of the above and foregoing certificate of incorporation of The Homœopathic Medical Society of the State of Pennsylvania, and in due form of law acknowledged the same to be their act and deed.

Witness my hand and official seal the third day of November, A. D. 1896.

[L. S.] WINFIELD S. SHEARD,
Notary Public.

IN THE COURT OF COMMON PLEAS FOR PHILADELPHIA COUNTY:

In the Matter of the Incorporation of The Homœopathic Medical Society of the State of Pennsylvania.

And now, to wit, this seventh day of December, A. D. 1896, the within Certificate of Incorporation having been on file in the Office

of the Prothonotary of said Court since the twelfth day of November, A. D. 1896, on which publication of notice of intended application was first made, as appears from the entry thereon, and due proof of said publication having been presented to me, I do hereby certify that I have perused and examined said instrument and find the same to be in proper form and within the purposes named in the first class of Corporations specified in Section 2 of the Act of April 29, 1874, and that said purposes are lawful and not injurious to the community. It is, therefore, on motion of William C. Hannis, Esq., ordered and decreed that the said Charter be approved and is hereby approved, and upon the recording of said Charter and its endorsements and this decree in the office of the Recorder of Deeds in and for said County, which is now hereby directed, the subscribers and their associates shall thenceforth be a Corporation for the purposes and upon the terms and under the name therein stated.

[L. S.] T. K. FINLETTER,
Judge.

Recorded in the Office for Recording Deeds, etc., in and for the City and County of Philadelphia in Charter Book No. 22, page 284, etc.

Witness my hand and Seal of Office this seventh day of December, A. D. 1896.

[L. S.] WM. GEARY,
Recorder of Deeds.

BY-LAWS.

ARTICLE I.—TITLE.

This Corporation shall be known by the name and title of The Homœopathic Medical Society of the State of Pennsylvania.

ARTICLE II.—OBJECT.

The said Society is formed for the purpose of organizing the homœopathic medical profession in the State of Pennsylvania and advancing medical sciences.

ARTICLE III.—Membership.

Section 1. This Society shall be composed of active, honorary and corresponding members.

Sec. 2. A candidate for active membership shall present to the Board of Censors an application, signed by himself, certifying that he has received the degree of Doctor of Medicine from an incorporated medical college, that he subscribes to the doctrine of *Similia Similibus Curentur*, and that he sustains a good moral character—these statements to be vouched for by two members of the Society in good standing. If found qualified, he may be elected a member. He shall not, however, be considered a member until he has paid the first year's dues and signed the Constitution, either in person or by proxy. An active member removing from the State, wishing to retain his membership, shall notify the Corresponding Secretary to that effect, otherwise the Corresponding Secretary shall drop his name from the roll. Any active member who shall be three years in arrears for dues shall forfeit his membership, and he shall not be reinstated until all arrearages shall have been paid. Membership shall also be forfeited by vote of the Society if a member fails to attend the meetings of the Society or present a paper once in five years. Any active member who shall be unable to comply with the requirements of this Society may be continued as an active member, without the payment of dues, by vote of the Society.

Sec. 3. Any Homœopathic physician, not a resident of Pennsylvania, who may be judged worthy, may, by a two-thirds vote of the members present, be elected an honorary member at any annual meeting; provided, that the proposal for honorary membership shall have been made at a previous annual meeting, and said proposal been approved by the Board of Censors, but no more than two shall be elected in one year. Honorary members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues.

Sec. 4. Any Homœopathic physician residing outside of the United States may be elected a corresponding member by a vote of two-thirds of the members present at any annual meeting, but not more than two shall be elected in one year. Corresponding members shall have all the privileges of membership except the right to vote and to hold office, and shall be exempt from dues.

ARTICLE IV.—Officers.

Section 1. The officers of this Society shall be a President, a First Vice-President, a Second Vice-President, a Recording Secretary, a Corresponding Secretary, a Treasurer, a Necrologist, a Board of Trustees consisting of nine members, and a Board of Censors consisting of three members.

Sec. 2. The nomination for officers of the Society shall be the special order of business for 11 o'clock on the morning of the second day of the annual meeting. The officers shall be elected by ballot the election to be the special order of business for 11 o'clock on the morning of the third day of the annual meeting. The candidate receiving a majority of the votes cast shall be declared elected. The officers elected shall enter upon their respective duties on the first day of January next succeeding their election, to serve for the term of one year, or until their successors are elected, except as hereinafter provided.

Sec. 3. The Board of Trustees shall serve for a term of three years, three members to be elected annually.

Sec. 4. The Censors shall be elected to serve for three years, one member to be elected annually.

ARTICLE V.—Duties of Officers.

Section 1. The President shall preside at all meetings of the Society. He shall preserve order, appoint all committees unless otherwise directed, and discharge all other duties usually pertaining to a presiding officer, in accordance with the provisions of the Charter and these By-Laws. He shall be, *ex officio*, a member of all standing committees of the Society, and Chairman of the Board of Trustees. He shall not be eligible to office two terms in succession. On assuming office it shall be his duty to appoint a Chairman of each of the Sections designated in Article VIII., Section 1, and the Chairman, in conjunction with the President, shall select his associates.

Sec. 2. The Vice-Presidents, in the order of their election, shall perform the duties of the President in his absence.

Sec. 3. The Recording Secretary shall keep correct minutes of the proceedings of the Society, and, when approved transcribe them in a book kept for that purpose. He shall have charge of the minute-

book, all papers, documents, etc., belonging to the Society, other than those pertaining to the Treasurer, the Trustees, or the Committee on Publication, and shall keep them during the intervals of the meetings of the Society. Within twenty-one days after adjournment he shall furnish the Committee on Publication with a correct copy of the minutes for publication in the Transactions, countersign orders upon the Treasurer in accordance with the By-Laws, and shall perform such other duties pertaining to his office as may from time to time be required. He shall be, *ex officio*, Chairman of the Committee on Organization, Registration and Statistics.

SEC. 4. The Corresponding Secretary shall preserve all letters received by the Society, conduct such correspondence as shall tend to advance its interests, prepare the order of business for the annual session of the Society, give at least two weeks' notice of all meetings, keep a record of all members, with the date of admission of each, present all communications to the Society, notify all committees of their appointment and of the business referred to them, and notify all members of their election. He shall be, *ex officio*, Chairman of the Committee on Publication.

SEC. 5. The Treasurer shall hold the evidence of all property belonging to The Homœopathic Medical Society of the State of Pennsylvania, receive all moneys intended for the Treasury of the Society, and deposit the same in the name of The Homœopathic Medical Society of the State of Pennsylvania as shall be directed by the Board of Trustees, make no payments except on orders drawn in accordance with the By-Laws, keep a full account of receipts and expenditures, which shall at all times be open to the inspection of the Board of Trustees, make a report to the Society in writing at each annual meeting, and, whenever required, of the state of his accounts and the condition of the Treasury, and shall annually notify all members of their arrearages.

SEC. 6. The Necrologist, upon the death of a member of the Society shall prepare a suitable obituary and present it to the Society at its annual meeting.

SEC. 7. The Trustees shall have general supervision of the business of the Society, hold at least one meeting every year, and make a report at the annual session of the Society. The Trustees shall have the power to disburse all money belonging to the Society. No money shall be paid from the treasury except upon a written order,

drawn on the Treasurer and countersigned by the Chairman and Secretary of the Board of Trustees.

The Trustees, acting as the Judicial Council, shall take cognizance of, and decide upon all questions of an ethical or judicial character. All questions of a personal character shall be referred at once, without discussion, to the Judicial Council. Every decision of the Council shall be in writing, signed by a majority of the members present, be reported to this Society at the earliest practical moment, and shall be final. The Council shall preserve permanent records of all its proceedings.

SEC. 8. The Censors shall examine the credentials of candidates for membership, and report to the Society for election those who may be found qualified. They may report in the regular order of business or at the close of the report of any bureau.

ARTICLE VI.—MEETINGS.

SECTION 1. The annual meeting shall be held in the month of September, on the days and at the place decided upon at the annual meeting next preceding; an invitation to hold the annual meeting in any locality shall be considered only when extended by a regularly organized society.

SEC. 2. Nine members shall constitute a quorum for the transaction of the ordinary business of the Society; but for scientific or literary purposes, unless an actual count be called for, a quorum shall always be presumed. For amending the By-Laws, twenty members shall constitute a quorum.

SEC. 3. The Board of Trustees shall have power to direct such other meetings as it may judge advisable.

SEC. 4. Should occasion arise making it necessary to change the time and place of meeting agreed upon at the previous annual session, the same may be done by a vote of the Board of Trustees.

ARTICLE VII.—DUES.

SECTION 1. Active members shall pay the sum of five dollars upon their election.

SEC. 2. Active members shall pay annually, in advance, the sum of three dollars toward defraying the expenses of the Society. Any

member who shall fail to pay his annual dues for three successive years shall be dropped from the roll of members, after having been notified by the Corresponding Secretary of the forfeiture of his membership. The published proceedings of the Society will be furnished only to those members who are not in arrears for dues.

ARTICLE VIII.—Sections.

Section 1. The following Sections shall be appointed as hereinafter provided:

Materia Medica and Provings.
Homœopathic Institutes and Clinical Medicine.
Surgery.
Obstetrics.
Gynæcology.
Pathology and Pathological Anatomy.
Ophthalmology, Otology and Laryngology.
Pædology.
Sanitary Science.

Sec. 2. Each Section shall be composed of not less than five members, and no member shall be placed on more than one Section.

Sec. 3. The Sections shall report in order of rotation each succeeding year, except the Section of Materia Medica, whose report shall be a special order of business at the opening of the afternoon session of the second day of the Society meeting.

Sec. 4. If a member of a Section shall resign or decline to serve, the Chairman of the Section shall fill the vacancy and notify the Corresponding Secretary of his action.

ARTICLE IX.—Standing Committees.

The following Committees shall be appointed by the President on assuming office:

A Committee on Legislation which shall serve two years, of at least nine members, to be appointed by the President in alternate years, whose duty it shall be to give special attention to all legislation involving the interests of the Society.

A Committee on Organization, Registration and Statistics, of at least three members, to be appointed by the President, of which the Recording Secretary shall be Chairman. It shall receive all creden-

tials of delegates to the Society; receive and preserve reports from local and State societies, colleges and other institutions; keep a record of the number of members admitted and withdrawn from the Society, and perform such other duties as may be directed by the Society. From these data the annual report of the Committee shall be prepared.

A Publication Committee, consisting of the Treasurer, Recording Secretary and Corresponding Secretary, the latter being Chairman; but the numbebr of its members may be increased at the discretion of the Society. It shall be the duty of the Committee within six months from the date of the annual meeting to publish and issue the Transactions to all who are entitled to receive them, unless otherwise directed by the Society.

ARTICLE X.—Papers and Discussions.

Section 1. Each paper presented to this Society shall be through its appropriate Section. All papers to be presented by any Section shall be in the hands of the Chairman thereof at the opening of the session. All papers shall be subject to the approval and revision of the Publication Committee. No paper will be received by the Society in an incomplete condition, and no paper will be published as part of the Transactions which has been published previous to its presentation to this Society. No paper shall occupy more than fifteen minutes in the reading, unless the time be extended by an affirmative three-fourths' vote of the members of the Society present. In the absence of the author of a paper the Chairman of its appropriate Section may request any member of the Society present to read the same or it shall be read at the request of five members. Any paper may be published in a medical journal subsequent to its presentation to the Society, provided that the original be retained in the custody of the Publication Committee.

All communications read before the Society shall become its property.

Sec 2. The discussion shall follow the reading of each paper, unless otherwise ordered by the Society. All discussions shall be confined to the subject of the paper or report. No member shall speak more than twice on the same subject, except by vote of the Society, and each speaker shall be limited to a speech of ten minutes, and to one of five minutes if he speaks a second time. No excess

of time shall be allowed, except by consent of the Society. The reader of the paper shall be allowed ten minutes at the close of the discussion.

ARTICLE XI.—Seal.

The Society shall have and use one common seal. The Corresponding Secretary shall be the custodian of the seal.

ARTICLE XII.—Senior Members.

Members of the Society who shall have maintained twenty-one years of consecutive membership shall be Senior Members, and their names shall be printed in capital letters in the list of members in the Transactons.

ARTICLE XIII.—Code of Ethics.

Section 1. The Code of Ethics of the American Institute of Homœopathy is adopted by this Society for its guidance.

Sec. 2. All complaints of violation of the Code of Ethics shall be referred to the Judicial Council, and the decision of the Council shall be final.

ARTICLE XIV.—Minutes.

The reading of the minutes for approval and record shall be the first order of business at the morning meetings of the Society, and at the close of the final session.

ARTICLE XV.—Amendments.

These By-Laws may be altered or amended by a vote of two-thirds of the members present at any annual meeting: *provided*, that notice of such proposed alteration or amendment shall have been given to the Society in writing at the annual meeting next preceding, and notice of such proposed alteration or amendment shall appear in the call for the meeting at which it is to be acted upon.

CODE OF MEDICAL ETHICS

OF THE

AMERICAN INSTITUTE OF HOMŒOPATHY

(ADOPTED IN 1893.)

SCOPE.

The scope of a Code of Medical Ethics comprises the reciprocal duties and obligations of physicians and patients; the duties and obligations of physicians to each other; and the reciprocal duties and obligations of physicians and the public.

FUNDAMENTAL PRINCIPLES.

The great principles upon which Medical Ethics are based are these:

1. The great end and object of the physician's efforts should be: "The greatest good to the patient."

2. The rule of conduct of physician and patient, and of physicians toward each other, should be the GOLDEN RULE: "As ye would that men should do to you, do ye also to them, likewise."

The various articles of the Code are only special applications of these great principles.

PART I.

RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND PATIENTS.

Article I. DUTIES OF PHYSICIANS TO PATIENTS.
" II. DUTIES OF PATIENTS TO THEIR PHYSICIANS.

PART II.

DUTIES AND OBLIGATIONS OF PHYSICIANS TO EACH OTHER.

Article I. Duties as Members of the Medical Profession.
" II. Professional Services to Each Other.
" III. Vicarious Services.
" IV. In Regard to Consultation.
" V. In Cases of Interference.
" VI. Differences Between Physicians.
" VII. Concerning Pecuniary Obligation.

PART III.

RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THE PUBLIC.

Article I. Duties of the Profession to the Public.
" II. Obligations of the Public to Physicians.

PART I.

OF THE RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THEIR PATIENTS.

Article I.—Duties of the Physician to the Patient.

Section 1. The physician should hold himself in constant readiness to obey the calls of the sick. He should bear in mind the sacred character of his calling and the great responsibility which it involves, and should remember that the comfort, the health and the lives of his patients depend upon the skill, attention and faithfulness with which he performs his professional duties.

Section 2. The physician, in order that he may be able to exercise his vocation to the best advantage of the patient, should possess his respect and confidence. These must be acquired and retained by faithful attention to his malady, by indulgent tenderness toward the weaknesses incident to his condition, and by the exercise of a firm but kindly authority. The physician is bound to keep secret whatever he may either hear or observe while in the discharge of his professional duties, respecting the private affairs of the patient or his family. And this obligation is not limited to the period during which the physician is in attendance on the patient. The patient should be

made to feel that he has, in his physician, a friend who will guard his secrets with scrupulous honor and fidelity.

SECTION 3. The physician should visit his patient as often as may be necessary to enable him to acquire and keep a full knowledge of the nature, progress, changes and complications of the disease, and to do for the patient the utmost of good that he is able. But he should carefully avoid making unnecessary visits, lest he render the patient needlessly anxious about his case, or expose himself to the charge of being actuated by mercenary motives.

SECTION 4. The physician should not give expression to gloomy forebodings respecting the patient's disease, nor magnify the gravity of the case. Bearing in mind the almost infinite resources of nature, he should be cheerful and hopeful, both in mind and manner. This will enable him the better to exercise his faculties and apply his knowledge for the patient's benefit, and will inspire the patient with confidence, courage and fortitude, which are the physician's best moral adjuvants.

But it is the physician's duty to state the true nature and prospects of the case, from time to time, to some judicious friend or relative of the patient, and to keep this person fully informed of its changes and probable issue; and if the patient himself request the physician to disclose to him the nature and prognosis of his disease it is his duty state tenderly, but frankly, the whole truth—provided the patient be of sound mind and strong enough to receive the disclosure without serious injury. The patient has a right to know the truth. If, moreover, facts within the physician's knowledge lead him to believe that it is of great importance, in relation to the patient's affairs, that he should be warned of the approach of death, it is the physician's duty to reveal to the patient's nearest friend, or to the patient himself, the true state of the case, and the importance of timely action.

SECTION 5. Whether the case proceed favorably, or become manifestly incurable, it is the physician's duty to continue his attendance faithfully and conscientiously so long as the patient may desire it. He is not justified in abandoning a case merely because he supposes it incurable.

SECTION 6. As the patient has an undoubted right to dismiss his physician for reasons satisfactory to himself, so likewise, the physician may, with equal propriety, decline to attend patients, when his self-respect or dignity seem to him to require this step; as, for example, when they persistently refuse to comply with his directions,

SECTION 7. In difficult or protracted cases consultations are advisable. They tend to increase the knowledge, energy and confidence of the physician, and to maintain the courage of the patient. The physician should be ready to act upon any desire which the patiene may express for a consultation, even though he may not himself feel the need of it. Nothing is so likely to maintain the patient's confidence as alacrity in this respect. Moreover, such a course is but just to him, for he has an indisputable right to whatever aid or counsel he may think likely to be of service to him.

SECTION 8. The intimate relations into which the physician is brought with his patient give him opportunity to exercise a powerful moral influence over him. This should always be exerted to turn him from dangerous or vicious courses towards a temperate and virtuous life. The physician is sometimes called to assist in practices of questionable propriety, and even of a criminal character. Among these may be mentioned the pretence of disease, in order to evade services demanded by law, as jury or military duty; the concealment of organic disease or of morbid tendencies, in order to secure favorable rates of life insurance, or for deception of other kinds; and especially the procurement of abortion when not necessary to save the life of the mother. To all such propositions, the physician should present an inflexible opposition. It is his duty, in an authoritative, but friendly manner, to explain and urge the nature, illegality and guilt of the proposed action, and to use every effort to dissuade from it, and to strengthen the patient's virtue and sense of right. The physician should be aware of the frequency of criminal abortion, and of the different methods employed for it, and should take every occasion to warn those who may be tempted to resort to it. In no case should the physician induce abortion, or premature labor, without a previous consultation, with the most experienced practitioners attainable, nor without the most clear and imperative reasons.

Article II.—Duties and Obligations of Patients to Their Physicians.

SECTION 1. Physicians are required, by the nature of their profession, to sacrifice comfort, ease and even health, for the sake of their patients. Patients should reflect upon this, and should understand and remember that they have corresponding duties and obligations towards their physicians.

SECTION 2. The patient should select a physician in whose knowl-

edge, skill and fidelity he can place implicit confidence; whose habits of life are regular and temperate, and whose character and demeanor are such that he can regard him as a personal friend. He must be able to confide in him freely. And the physician should not be changed for light reasons. A physician thoroughly acquainted with the constitution, temperament and tendencies of a family can the more successfully treat them.

SECTION 3. The patient should always consult his physician as early as possible after he has discovered that he is ill. A disease which is trifling at its onset may grow formidable through neglect. The physician should be regarded as a confidential adviser, who, on being early consulted, may prevent a sickness.

SECTION 4. The patient should faithfully and unreservedly state to his physician the supposed cause of his malady, and tell him everything that may have a bearing upon its nature. Since the physician is under the strongest obligations to secrecy, the patient should not allow considerations of delicacy, modesty or pride to prevent an entirely frank statement of his case, and candid and full replies to interrogatories.

SECTION 5. The patient should implicitly obey his physician's injunctions as regards diet, regimen and medical treatment. If he deviate from these directions, he cannot hold the physician to a full responsibility in the case; and, further, by a partial obedience he incurs some personal risk, since, in the treatment of diseases, all parts of the physician's advice are made to harmonize, and each is dependent on the others and may be unsafe without the coincidence of the others. Moreover, he does the physician an undeserved, and often a serious, wrong. If the patient have not sufficient confidence in his physician, and respect for him, to follow his directions, it were better for him to frankly say so, and to employ another in whom he can confide.

The patient should never allow himself, while under a physician's treatment, to take other medicines than those prescribed by him. He would, by so doing, incur a serious risk of taking medicines that are incompatible with each other. If desirous of trying any other mode of treatment it would be much better frankly to state the fact to his physician and ask his advice.

SECTION 6. The patient should, if possible, avoid receiving the friendly visit of a physician other than the one under whose charge he is. When he receives such visits he should avoid conversation on

the subject of his disease for an accidental observation might give him false impressions respecting his disease or destroy his confidence in the treatment he is pursuing. He should never send for a consulting physician without the express consent of his own medical attendant, for physicians can act together for the advantage of their patient only when they act harmoniously. Nor should he, by a secret appointment, constrain his medical attendant to meet another physician with whom he might not be willing to consult; but the patient has an undoubted right to have the opinion of any physician whom he may desire upon his case. His proper course is to request his medical attendant to arrange a consultation and frankly state his desire for the physician whom he may prefer. If his medical attendant decline the consultation it is then for the patient to determine whether he will insist and thus dismiss his medical attendant, or whether he will defer to the judgment of his own physician. And the patient has a right thus to choose.

SECTION 7. If the patient wishes to dismiss his physician he should, in justice and in common courtesy, state his reasons, and, if possible, in a friendly manner. To dispense with the service of a physician need not, of necessity, change the social relations of the parties.

SECTION 8. The patient should, when practicable, send for the physician in the morning, before his usual hour for leaving home. He will, by so doing, secure his earlier attendance, and will enable him the better to apportion his time so as to do justice to all his calls and engagements. He should call on his physician during his office hours only, and should avoid disturbing him in hours devoted to meals, rest and sleep. And in receiving his physician's visits he should avoid compelling him to wait, even a few minutes. The aggregate of petty detentions, while the patient is making some needless preparation to receive the physician, amount to a serious waste of valuable time.

PART II.

OF THE DUTIES AND OBLIGATIONS OF PHYSICIANS TO THE PROFESSION AND TO EACH OTHER.

Article I.—Duties to the Profession.

SECTION 1. Inasmuch as every member of the medical profession partakes of the honor in which it is held, and is entitled to its

privileges and immunities and profits by the scientific labors of his predecessors and associates, it is his duty faithfully to endeavor, in his turn, to elevate the position of the profession and, by every honorable exertion, to enrich the science of medicine.

SECTION 2. In no other profession should a higher standard of morality and greater purity of personal character be required. Physicians ought to come up to this standard and do what they may to exalt it. As the practice of medicine requires constant exercise of a vigorous and clear understanding, and as the practitioner should be, at all times, ready for emergencies in which the welfare and even the life of a fellow-creature may depend upon his steady hand, acute eye and unclouded brain, it is incumbent upon the physician to be temperate in all things.

SECTION 3. The physician should not resort to public advertisements or private cards or handbills, inviting the attention of persons affected by particular diseases or publicly offering advice and medicine to the poor *gratis*, or promising radical cures. Neither should he publish cases or operations in the daily prints, nor invite laymen to be present at operations, nor solicit or exhibit certificates of skill and success, nor perform any similar act.

SECTION 4. It is equally derogatory to professional character for a physician to hold a patent for any nostrum or any surgical instrument or appliance, or to keep secret the nature or composition of any medicine used by him. Such restriction or concealment is inconsistent with the beneficence and liberality which should characterize the medical profession. But it is the duty of the physician to avail himself of every opportunity to observe the action and study the properties of new or secret remedies and new processess of preparing medicines as well as new modes of treating diseases, and to subject them to the analysis of scientific investigation. For the physician should always bear in mind that the great object of his profession is to cure the sick, and that it is not only admissible, but it is his solemn duty to investigate thoroughly and without prejudice whatever offers any probability of adding to his knowledge of the art and means of curing and of thus enriching the science of medicine.

Article II.—Professional Services of Physicians to Each Other.

SECTION 1. All practitioners of medicine, their wives and children, while under the paternal care, are entitled to the gratuitous

services of any one or more of the faculty residing near them. Physicians, when ill, are incompetent to prescribe for themselves. The natural anxiety and solicitude which they feel for members of their own family when ill tend to obscure their professional judgment and make it difficult to treat them. Under these circumstances physicians are peculiarly dependent on each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. But visits should not be obtruded officiously or unasked upon a sick physician.

If, however, a physician in affluent circumstances, request the attendance of a distant professional brother and offer an *honorarium*, it is not proper to decline it, for one should not, even from a kindly motive, impose upon another a pecuniary obligation which the recipient would not wish to incur.

If a physician is called from any considerable distance the expense of travel, etc., thereby incurred should always be paid by the physician receiving the visit, and an *honorarium* may be tendered if time is consumed in making the visit.

Article III.—Duties of Physicians as Regards Vicarious Offices.

SECTION 1. Attention to his personal affairs, the pursuit of health and the various contingencies to which the physician is peculiarly exposed, sometimes compel him temporarily to withdraw from his duties to his patients and to request some of his professional brethren to discharge them for him. Compliance with such a request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the physician relieved. And when this is done for a short period only all the pecuniary obligations for such services should belong to him. But if a physician neglect his business in quest of amusement and pleasure he is not entitled to the frequent and long-continued exercise of this fraternal courtesy without conceding to the physician who acts for him the fees accruing from the duties discharged by the latter.

SECTION 2. Obstetrical and surgical cases involve unusual fatigue and responsibility, and it is just that the fees accruing therefrom should belong to the physician who attends them.

Article IV.—Duties of Physicians in Regard to Consultations.

SECTION 1. A complete medical education, of which the diploma of a medical college is the formal voucher, furnishes the only pre-

sumptive evidence of the professional acquirements and abilities. But the annals of the profession contain the names of some who not having the advantage of a complete medical education, became, nevertheless, through their own exertions and abilities, brilliant scholars and successful practitioners. A practitioner, therefore, whatever his credentials may be, who enjoys a good moral and professional standing in the community, should not be excluded from fellowship, nor his aid rejected, when it is desired by the patient in consultation. No difference in views on subjects of medical principles or practice should be allowed to influence a physician against consenting to a consultation which a fellow practitioner. The very object of a consultation is to bring together those who may, perhaps, differ in their views of the disease and its appropriate treatment, in the hope that, from a comparison of different views, may be derived a just estimate of the disease and a successful course of treatment.

No tests of orthodoxy in medical practice should be applied to limit the freedom of consultations. Medicine is a progressive science. Its history shows that what is heresy in one century may and probably will be orthodoxy in the next. No greater misfortune can befall the medical profession than the action of an influential association or academy establishing a creed or standard of orthodoxy or "regularity." It will be fatal to freedom and progress in opinion and practice. On the other hand, nothing will so stimulate the healthy growth of the profession, both in scientific strength and in the honorable estimation of the public, as the universal and sincere adoption of a platform which shall recognize and guarantee:

1. A truly fraternal good will and fellowship among all who devote themselves to the care of the sick.

2. A thorough and complete knowledge, however obtained, of all the direct and collateral branches of medical science—as it exists in all sects and schools of medicine—as the essential qualification of a physician.

3. Perfect freedom of opinion and practice, as the unquestionable prerogative of the practitioner, who is the sole judge of what is the best mode of treatment in each case of sickness intrusted to his care.

The physician may, with propriety, decline to meet a practitioner of whose inimical feelings toward himself or of whose general unfairness in consultations he is satisfied. But in such a case he should explain to the patient his reasons; and if the patient desire the opinion of the practitioner objected to the family physician may

withdraw from the case and allow the other to be sent for. But in justice to the latter the state of affairs should be explained to him at the time he is requested to visit the patient.

SECTION 2. The utmost punctuality should be observed in the visits of physicians when they are to hold consultations together; and this is generally practicable, for society allows the plea of professional engagements to excuse the neglect of all others, and to be a valid reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period of time, after which the consultation should be considered postponed to a new appointment. If it be the attending physician who is present he will, of course, see the patient and prescribe; but if it be the consulting physician he should retire without seeing the patient, except in case of emergency, or when he has been called from a considerable distance, in which case he may examine the patient and give his opinion in writing and under seal, to be delivered to the attending physician.

SECTION 3. In consultations no rivalry or jealousy should be indulged in. Candor, probity and all due respect should be exercised toward the physician in charge of the case. If the consulting physician cannot agree with him respecting the nature and proper treatment of the case the physician should state this fact to the patient or his nearest friend, both physicians being present at the time, and should request him to select the one in whom he has most confidence. But if they agree sufficiently to take joint charge of the case, then the consulting physician must justify and uphold, so far as he can conscientiously do so, the practice of his associate, and must abstain from any hints, insinuations or actions which might in any way impair the confidence which the patient reposes in him, or affect his reputation. He must refrain from any extraordinary attentions or assiduities calculated to ingratiate himself in the patient's favor and to supplant his associate

SECTION 4. In consultations the attending physician should first put the necessary questions to the patient. After this the consulting physician should make such additional inquiries and examinations as may be needed to satisfy him of the true nature of the case. But he should avoid making a parade of examining the patient more thoroughly than had been done before, rather suggesting to the attending physician, where .... is possible, to make whatever examinations

he desires, than making them himself. Both physicians should then retire to a private room for deliberation.

Section 5. In consultations the attending physician should deliver his opinion first; and, when there are several consulting physicians, they should express their opinions in the order in which they have been called in. Should an irreconcilable diversity of opinion occur, when more than two physicians meet in consultation, the opinion of the majority should be regarded as decisive; but, if the number be equal on each side, the decision should rest with the attending physician. If two physicians, in consultation, cannot agree they should call in a third to act as umpire. If this be not practicable the patient must be requested to select the physician in whom he is most willing to confide. The physician who is left in the minority should, without any ill-feeling, retire from the consultation and from any further participation in the management of the case; and, in justice to the physician thus retiring, the fact of his difference from his associates should, in the presence of all the physicians attending, be explained to the patient as his reason for withdrawing from the case.

Section 6. The attending physician should communicate to the patient or his friends the directions agreed upon in the consultation, as well as any opinion which it may be thought proper to express. But no statement or discussion should take place before the patient or his friends, except in the presence of all physicians attending, and by their common consent. And no opinions or prognostications should be delivered which are not the result of previous deliberation and concurrence. No decision arrived at in a consultation is to be regarded as restraining the attending physician from making such variations in the treatment as any subsequent change in the case may demand. But such variation, and the reason for it, ought to be carefully noted at the time, and detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician, if he is sent for in an emergency when the attending physician is out of the way; and similar explanations must be made by him at the next meeting.

Section 7. Sometimes a special consultation is desirable in cases in which the continued attendance of two physicians might be objectionable to the patient. The consulting physician, in such a case, should sedulously avoid all further unsolicited attendance. Such

consultations require an extraordinary outlay of time and attention, and at least a *double honorarium* may be reasonably expected.

SECTION 8. The consulting physician cannot, with propriety, take exclusive charge at any time of the patient in whose case he has been called in consultation without the consent of the attending physician, except in cases provided for by the third sentence of section 3, and by the fourth sentence of section 5, of this article.

Article V.—Duties of Physicians in Cases of Interference.

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should base their expectations of success upon the extent of their qualifications, not upon intrigue or artifice. A physician should not allow himself to feel envious or jealous of a brother practitioner. The distinction which one successful physician wins is shared by the whole profession. Nor should a physician suffer himself to feel ill-will towards another who may come into his neighborhood and appears likely to take a share of the business which he has hitherto enjoyed. Such feelings are inconsistent with the beneficent and liberal nature of the profession. Liberality and true generous fraternity in thought word and deed will unite the interests of all the members of the profession, and will so exalt the estimation in which it is held in the community that, confidence being increased, business will likewise increase; and to physicians will be accorded the position which, of right, should be theirs, that of confidential family advisers in all matters pertaining to the care of the body in health no less than in sickness.

SECTION 2. The physician, in his intercourse with a patient who is under the care of another practitioner, should observe the strictest caution and reserve. No meddling questions should be asked in any interview for business or friendship, no disingenuous hints thrown out relating to the nature and treatment of his disorder; nor should the patient be allowed to converse upon these topics. No course of conduct should be pursued which might, directly or indirectly, tend to diminish the trust reposed in the physician employed.

SECTION 3. A physician should not take charge of a patient who is, or has recently been, under the charge of another practitioner in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or has been regularly notified that his services are no longer required. Under such circumstances no

unjust or illiberal remarks should be made or insinuations thrown out in relation to the treatment pursued by the previous physician. Nor should the physician permit the patient unreasonably to find fault with his predecessor, for patients often become dissatisfied with their attention on account of the mere duration of a case which no degree of professional knowledge or skill could have shortened.

SECTION 4. In cases of accident or sudden emergency one or more physicians are often sent for by alarmed friends. Courtesy should assign the patient to the first of these that arrives; and he should select from those present such additional assistance as he may deem necessary. But he should also request the family physician (if there be one) to be sent for, and on his arrival, resign the case into his hands. The practitioner of the patient, when he arrives, should take the place of any one called in his absence. "The practitioner of any patient" is the man whom he has in any way given to understand that he regards him as his medical adviser, or who would now be in charge of the case were it not for his absence, sickness or other disability.

SECTION 5. In a sparse population, a physician, when visiting a sick person, may be desired to see, in an emergency, a neighboring patient, who is under the regular charge of another physician. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere as little as possible with the general plan of treatment; to assume no farther direction of the case unless it be expressly desired; and, in the latter case, to request an immediate consultation with the practitioner previously employed.

SECTION 6. A wealthy physician should not give advice *gratis* to the affluent, because his so doing is an injury to his professional brethren. The office of the physician can never be supported as an exclusively beneficent one, and it is defrauding, in some degree, the common fund when fees are dispensed with which might justly be claimed.

SECTION 7. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished in the absence of the former, the latter is entitled to the fee, but he should resign the patient to the practitioner first engaged.

Article VI.—Of Differences Between Physicians.

SECTION 1. Diversity of opinion and opposition of interests may,

in the medical, as in other professions, sometimes occasion controversy and even contention. When such cases occur and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court medical*.

Article VII.—Of Pecuniary Acknowledgments.

SECTION 1. Some general rules should be adopted by the physicians in every town or district relative to pecuniary acknowledgments from patients. These should be adhered to by physicians as uniformly as circumstances will permit. They serve, likewise, as a standard to which appeal may be taken in cases of doubt or dispute.

SECTION 2. Members of the medical profession have been so uniformly in the habit of attending, gratuitously, the indigent sick, and, in general, of answering every call promptly and without a question as to whether they are to receive remuneration therefor, that many persons seem to think they have a right to demand the service of physicians, and do, in fact, call upon them freely, and neglect or refuse to render any pecuniary equivalent, although abundantly able to do so. They impose upon one physician in this way until they have exhausted his patience, and then call upon another; and thus, in the course of a few years, make the circuit of the profession in their neighborhood. It is proper for the physicians of a community to make a list of the names of such individuals, and to demand, before visiting those whose names are on it, adequate security that their *honorarium* will be paid.

PART III.

THE RECIPROCAL DUTIES AND OBLIGATIONS OF PHYSICIANS AND THE PUBLIC.

Article I.—Duties of Physicians to the Public.

SECTION 1. As good citizens, it is the duty of physicians to be vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens. They should be always ready to give counsel to the public in relation to matters appertaining to their profession, as, for example, on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten

the public in regard to quarantine regulations, the location, arrangements and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases. And, when pestilence prevails, it is their duty to face the danger and to continue their labors for the alleviation of suffering and the saving of life, even at the risk of their own lives.

SECTION 2. Physicians should always be ready, when called on by the proper authorities, to enlighten coroners' inquests and courts of justice on matters strictly medical, such as involve questions relating to insanity, legitimacy, or sudden and violent deaths, and in regard to the various other subjects embraced in the science of medical jurisprudence. But, in these cases, and especially where they are required to make post-mortem examinations, it is just and right, in consequence of the time, labor and skill required and the responsibility and risk they incur, that the public should award them more than a mere consulting fee.

SECTION 3. There is no profession, by the members of which eleemosynary services are more freely dispensed than they are by physicians; but justice demands that some limits should be placed to the claims upon such offices at their hands. Poverty, professional brotherhood, the benevolent and scantily remunerated occupation of the individual patient, and certain of the public duties referred to in Section 1 of this Article, should always be recognized as presenting valid claims for gratuitous services. But neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, or perform military duty, or to certify to the state of health of parties wishing to insure their lives, obtain pensions or the like, without a pecuniary acknowledgment. But to indigent persons such professional services should always be cheerfully and freely accorded.

Article II.—Obligations of the Public to Physicians.

SECTION 1. The benefit accruing to the public, directly and indirectly, from the active and constant labors and beneficence of the

medical profession are so numerous and important that physicians are justly entitled to the utmost consideration from the community. The public ought, likewise, to entertain a just appreciation of the proper qualifications of a practitioner of medicine; to make a due discrimination between true science and the assumptions of ignorance and empiricism; to afford every encouragement and facility for the acquisition of medical education, and not to allow the provisions of their statute books or of the prospectus of their chartered institutions to interpose any obstacles to the attainment of the fullest knowledge of every branch of medical science, or in any way, to restrain the most entire freedom of thought, investigation and action in matters appertaining to the practice of medicine.

OFFICERS OF THE SOCIETY FROM ITS ORGANIZATION TO THE PRESENT TIME.

PRESIDENTS.

1866. J. B. GOOD, M. D.
1867. W. WILLIAMSON, M. D.
1868. C. PRESTON, M. D.
1869. W. WILLIAMSON, M. D.
1870. O. B. GAUSE, M. D.
1871. M. COTE, M. D.
1872. J. H. MARSDEN, M. D.
1873. B. W. JAMES, M. D. (February.)
1873. J. F. COOPER, M. D. (October.)
1874. C. A. STEVENS, M. D.
1875. R. J. McCLATCHEY, M. D.
1876. J. E. JONES, M. D.
1877. J. C. BURGHER, M. D.
1878. H. N. GUERNSEY, M. D.
1879. L. H. WILLARD, M. D.
1880. J. K. LEE, M. D.
1881. J. H. McCLELLAND, M. D.
1882. J. C. MORGAN, M. D.
1883. P. DUDLEY, M. D.
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1885. J. E. JAMES, M. D.
1886. D. COWLEY, M. D.
1887. A. R. THOMAS, M. D.
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1890. C. F. BINGAMAN, M. D.
1891. AUGUSTUS KORNDŒRFER, SR., M. D.
1892. E. C. PARSONS, M. D.
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1894. C. S. MIDDLETON, M. D.
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1896. W. W. VAN BAUN, M. D.
1897. Z. T. MILLER, M. D.
1898. W. H. KEIM, M. D.
1899. B. F. BETTS, M. D.
1900. C. C. RINEHART, M. D.
1901. H. B. WARE, M. D.
1902. R. P. MERCER, M. D.
1903. O. S. HAINES, M. D.
1904. D. C. KLINE, M. D.
1905. W. A. SEIBERT, M. D.

FIRST VICE-PRESIDENTS.

1866. J. H. P. FROST, M. D.
1867. J. H. MARSDEN, M. D.
1868. H. HOFMAN, M. D.
1870. C. A. STEVENS, M. D.
1871. R. FAULKNER, M. D.
1872. H. N. GUERNSEY, M. D.
1873. M. PRESTON, M. D. (February.)
1873. M. FRIESE, M. D. (October.)
1874. I. LEFEVRE, M. D.
1875. J. E. JONES, M. D.
1876. J. C. BURGHER, M. D.
1877. L. H. WILLARD, M. D.
1878. W. R. CHILDS, M. D.
1879. M. M. WALKER, M. D.
1880. H. DETWILLER, M. D.
1881. B. F. BETTS, M. D.
1882. P. DUDLEY, M. D.
1883. HUGH PITCAIRN, M. D.
1884. C. MOHR, M. D.
1885. D. COWLEY, M. D.
1886. W. H. BIGLER, M. D.
1887. W. J. MARTIN, M. D.
1888. W. B. TRITES, M. D.
1889. C. F. BINGAMAN, M. D.
1890. C. S. MIDDLETON, M. D.
1891. E. C. PARSONS, M. D.

1892. F. R. SCHMUCKER, M. D.
1893. SARAH J. COE, M. D.
1894. Z. T. MILLER, M. D.
1895. M. M. WALKER, M. D.
1896. R. W. McCLELLAND, M. D.
1897. W. H. KEIM, M. D.
1898. H. B. WARE, M. D.
1899. A. P. BOWIE, M. D.
1900. E. H. HILL, M. D.
1901. H. L. NORTHROP, M. D.
1902. W. F. EDMUNDSON, M. D.
1903. W. A. SEIBERT, M. D.
1904. THEO. SURETH, M. D.
1905 C. P. SEIP, M. D.

SECOND VICE-PRESIDENTS.

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1868. J. J. DETWILLER, M. D.
1870. J. H. McCLELLAND, M. D.
1871. H. M. LOGEE, M. D.
1872 S. F. CHARLTON, M. D.
1873. J. C. BURGHER, M. D. (February.)
1873. H. R. FETTERHOFF, M. D. (October.)
1874. W. F. SPETH, M. D.
1875. H. N. MARTIN, M. D.
1876. J. E. JAMES, M. D.
1877. J. E JAMES, M D.
1878. A. KORNDŒRFER, SR., M. D.
1879. L. M. ROSSEAU, M. D.
1880. J. W. ALLEN, M. D.
1881. J. J. DETWILLER, M. D.
1882. J. B. WOOD, M. D.
1883. C. F BINGAMAN, M D.
1884. H. DETWILLER, M. D.
1885. J. K. LEE, M. D.
1886. J. R. READING, M. D.
1887. EDWARD CRANCH, M. D.
1888. C. F. BINGAMAN, M. D.
1889. JOHN MALIN, M. D.
1890. C. H. LEE, M. D.
1891. M. J. CHAPMAN, M. D.
1892. SARAH J. COE, M D.
1893. J. L. FERSON, M. D.
1894. ELIZA L. McCLURE, M. D.
1895. A. P. BOWIE, M. D.
1896. E. R. SNADER, M. D.
1897. H. B. WARE, M. D.
1898. EDWARD CRANCH, M. D.
1899. ANNA C. CLARKE, M. D.
1900. R. P. MERCER, M. D.
1901. W. J. MARTIN, M. D.
1902. W. A SEIBERT, M. D.
1903. THEO. SURETH, M. D.
1904. E. R. GREGG, M. D.
1905. W. G. DIETZ, M. D.

RECORDING SECRETARIES.

1866-1872. B. W. JAMES, M. D.
1873-1878. M. M. WALKER, M. D.
1879-1882. Z. T. MILLER, M. D.
1883. T. M. STRONG, M. D.
1884, 1885. C. BARTLETT, M. D.
1886, 1887. H. F. IVINS, M. D.
1888, 1889. J. H. CLOSSON, M. D.
1890-1894. J. R. HORNER, M. D.
1895. E. M. GRAMM, M. D.
1896-1905. G. B. MORELAND, M. D.

CORRESPONDING SECRETARIES.

1866-1872. R. J. McCLATCHEY, M. D.
1873-1875. P. DUDLEY, M. D.
1876-1879. J. C. GUERNSEY, M. D.
1880-1885. R. E. CARUTHERS, M. D.
1886-1888. C. BARTLETT, M. D.
1889-1894. E. R. SNADER, M. D.
1895. J. R. HORNER, M. D.
1896-1905. E. M. GRAMM, M. D.

TREASURERS.

1866. D. COWLEY, M. D.
1867. H. H. HOFMAN, M. D.
1868. W. WILLIAMSON, M. D.
1870. W. J. BLAKELY, M. D.
1871-1873. (February) O. B. GAUSE, M. D.
1873. (October) and 1874. R. J. McCLATCHEY, M. D.
1875-1899. J. F. COOPER, M. D
1900-1905. ELLA D. GOFF, M. D.

NECROLOGISTS.

1872-1883. W. R. CHILDS, M. D.
1884. M. M. WALKER, M. D.
1885-1889. W. R. CHILDS, M. D.
1890-1894. W. J. MARTIN, M. D.
1895-1896. T. S. DUNNING, M. D.
1897-1901. T. L. BRADFORD, M. D.
1902. J. W. HASSLER, M. D.
1903-1905. C. WEAVER, M. D.

LIST OF MEMBERS.

1899—Adams, T. Louis, M. D., 1831 Chestnut Street, Philadelphia.
1905—Allen, John V., M. D., 4637 Frankford Ave., Philadelphia.
1905—Armor, Russell B., M. D., Crafton.
1899—Arthur, Alexander B., M. D., 2039 Spring Garden Street, Philadelphia.
1899—Artz, Jerome L., M. D., 30th and Westfield Streets, Camden, N. J.
1898—Asheraft, Leon T., M. D., 1833 Chestnut Street, Philadelphia.
1892—Baier, George F., M. D., Norwood.
1901—Baker, A. L., M. D., Altoona.
1896—Baker, Albra W., M. D., 427 Park Ave., Williamsport.
1905—Bamberger, F. E., M. D., Lebanon.
1905—Barclay, H. B., M. D., Greensburg.
1905—Barker, Walter C., M. D., 2043 Girard Ave., Philadelphia.
1898—Barnes, Alonzo M., M. D., 3517 N. Broad Street, Philadelphia.
1881—BARTLETT, CLARENCE, M. D., 1437 Spruce Street, Philadelphia.
1905—Bartine, C. W., M. D., 253 W. Hansberry Street, Philadelphia.
1889—Bayley, Weston D., M. D., 124 S. 16th Street, Philadelphia.
1902—Belville, J. E., M. D., 5915 Green Street, Gtn., Philadelphia.
1897—Berlinghof, George J., M. D., 1507 Capouse Ave., Scranton.
1904—Bernstein, Ralph, M. D., 37 S. 19th Street, Philadelphia.
1875—BETTS, B. F., M. D., 1609 Girard Ave., Philadelphia.
1904—Betts, Norman S., M. D., 1503 Locust Street, Philadelphia.
1904—Bibighaus, J. R., M. D., Glenside.
1905—Biddle, J. T., M. D., 515 W. Main Street, Monongahela.
1886—Bier, P. A., M. D., 4200 Butler Street, Pittsburg
1900—Bierman, H., M. D., Bloomsburg.
1892—Bigelow, W. S., M. D., Phillipsburg.
1873—BINGAMAN, C. F., M. D., 412 Smith Block, Pittsburg.
1896—Birch, J. P., M. D., 3801 Powelton Ave., Philadelphia.
1894—Bittner, Albert Jacob, M. D., Allentown.

1905—Blackburn, E. C., M. D., 1421 11th Ave., Altoona.
1892—Blair, W. W., M. D., 400 Penn Ave., Pittsburg.
1904—Blake, Eva N., M. D., 190 Maplewood Ave., Philadelphia.
1898—Boericke, Felix A., M. D., 1011 Arch Street, Philadelphia.
1905—Bohn, Daniel, M. D., 1021 Seventh Ave., Altoona.
1892—Boileau, John D., M. D., 804 W. Lehigh Ave., Philadelphia.
1905—Bolsinger, P. L., M. D., 533 Locust Street, Johnstown.
1892—Books, B. F., M. D., 1117 Twelfth Ave., Altoona.
1904—Boone, G. H., M. D., Pottsville.
1872—BOWIE, A. P., M. D., 87 Main Street, Uniontown.
1882—BOYER, FRANCIS W., M. D., Pottsville.
1894—Bradford, Thomas Lindsley, M. D., 1862 Frankford Ave., Philadelphia.
1904—Bradley, Thomas B., M. D., 960 N. 5th Street, Philadelphia.
1883—BRANSON, MARY, M. D., 1719 Arch Street, Philadelphia.
1896—Brewer, Mary, M. D., 330 E. Chelten Ave., Gtn., Philadelphia.
1896—Brewster, F. D., M. D., 309 Jefferson Ave., Scranton.
1898—Brickley, E. N., M. D., York.
1904—Brooks, Charles M., M. D., 1409 N. 15th Street, Philadelphia.
1905—Brose, George W., M. D., 417 W. Market Street, York.
1891—Brown, C. H., M. D., Perry Building, Philadelphia
1898—Brown, C. Sheble, M. D., 3046 Frankford Ave., Philadelphia.
1905—Brown, L. S., M. D., Smith Block, Pittsburg.
1894—Brown, S. G. A., M. D., Shippensburg.
1905—Browne, William C., M. D., Burnside.
1904—Brunnell, C. M., M. D., Stroudsburg.
1893—Bryson, H. Ballou, M. D., 312 Smith Block, Pittsburg.
1886—Bulick, T. M., M. D., 317 N. Second Street, Harrisburg.
1877—BULLARD, J. A., M. D., 200 S. Franklin Street, Wilkes-Barre.
1881—BUNTING, H. M., M. D., 521 Swede Street, Norristown.
1888—Burchfield, S. E., M. D., 803 Ligonier Street, Latrobe.
1905—Byer, J. M., M. D., Bustleton.
1896—Caley, Joseph M., M. D., 1513 Green Street, Philadelphia.
1898—Calhoun, John C., M. D., 803 Arch Street, Pittsburg.
1888—Carmichael, T. H., M. D., 7127 Germantown Ave., Philadelphia.
1897—Carter, Woodward D., M. D., 1311 South Broad Street, Philadelphia.
1898—Challinor, S. Boyd, M. D., 311 Oakland Ave., Pittsburg.

1905—Champlin, H. W., M. D., Bloomsburg.
1905—Chantler, I. B., M. D., 537 Beaver Street, Sewickley.
1875—CHAPMAN, MILLIE J., M. D., 804 Penn Ave., Pittsburg.
1900—Chase, Theo. L., M. D., 1604 Walnut Street, Philadelphia.
1905—Cheesman, Walter C., M. D., 211 N. 52d Street, Philadelphia.
1888—Chisholm, H. C., M. D., 528 Penn Street, Huntingdon.
1905—Christy, Daniel, M. D., Millvale.
1885—Christine, G. Maxwell, M. D., 2043 N. 12th Street, Philadelphia.
1899—Clark, Edward P., M. D., Connellsville.
1902—Clark, Ernest L., M. D., Media.
1893—Clark, George H., M. D., 116 W. Walnut Lane, Germantown, Philadelphia.
1889—Clarke, Anna C., M. D., 426 Adams Ave., Scranton.
1905—Clifford, Joseph B., M. D., McKeesport.
1886—Closson J. H., M. D., 53 W. Chelten Ave., Germantown, Philadelphia.
1901—Cochran, Mary J., M. D., Wallace Building, Bellevue.
1883—COE, SARAH J., M. D., 108 N. Franklin Street, Wilkes-Barre.
1894—Conarroe, Thomas H., M. D., 1807 Wallace Street, Philadelphia.
1895—Cook, W. C., M. D., 501 Bijou Bldg., Pittsburg.
1894—Cooke, Mary A., M. D., 2113 N. 18th Street, Philadelphia.
1889—Coolidge, J. W., M. D., 334 Washington Ave., Scranton.
1887—Cooper, John, M. D., 54 Arch Street, Allegheny.
1901—Cooper, R. C., M. D., 1111 Federal Street, Allegheny.
1895—Cooper, Wm. H., M. D., Oakmont.
1882—CRANCH, EDW., M. D., 109 W. Ninth Street, Erie.
1904—Crandell, Frank Foster, M. D., Turtle Creek.
1885—Crowther, Isaac, M. D., 700 Madison Street, Chester.
1905—Culin, William D., M. D., 708 N. 40th Street, Philadelphia.
1891—Davis, B. L., M. D., 575 Lincoln Ave., Bellevue.
1897—Dehoff, J. W., M. D., 480 W. Market Street, York.
1866—DETWILLER, JOHN J., M. D., 52 Centre Square, Easton.
1893—Detwiller, W. K., M. D., Easton.
1903—De Witt, G. M., M. D., Board of Trade Bldg., Scranton.
1905—Diehl, Reuben O., M. D., Manheim.
1886—Dietz, W. G., M. D., 21 N. Vine Street, Hazleton.

1878—DINSMORE, S. W. S., M. D., 60 N. Main Street, Sharpsburg.
1905—Douglas, Fullerton J., M. D., 611 Penn Ave., Pittsburg.
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1891—Drake, J. C. Merle, M. D., 720 Sassafrass Street, Erie.
1905—Dreher, C. B., M. D., Tamaqua.
1867—DUDLEY, PEMBERTON, M. D., 1405 N. 16th Street, Philadelphia.
1882—DU FOUR, W. M., M. D., 755 W. Tthird Street, Williamsport.
1881—DUNNING, T. S., M. D., 1328 N. 15th Street, Philadelphia.
1893—Ealer, Percy H., M. D., 2027 Spring Garden Street, Philadelphia.
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1873—EDMUNDSON, W. F., M. D., 1321 Fifth Ave., Pittsburg.
1904—Ervin, J. H., M. D., Jenkintown.
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1896—Esrey, L. K., M. D., 1642 Pine Street, Philadelphia.
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1904—Fleagle, Maurice M., M. D., Hanover.
1884—FLEMING, R. K., M. D., 6224 Station Street, Pittsburg.
1892—Flint, Harvey E., M. D., West 11th Street, Erie.
1892—Flint, John F., M. D., 1112 Peach Street, Erie.
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1905—Franck, W. L., M. D., 173 W. Tabor Street, Olney Philadelphia.
1905—Fulmer, Charles R., 1211 W. Allegheny Ave., Philadelphia.
1873—FULTON, H. W., M. D., 325 N. Highland Ave., Pittsburg.
1902—Furman, Horace S., M. D., 1705 Tioga Street, Philadelphia.
1905—Gaggin, Verner S., M. D., 5182 Liberty Ave., Pittsburg.
1898—Gann, G. W., M. D., Du Bois.
1904—Garis, Frank A., M. D., Bethlehem.
1904—Garner, Albert Rowland, M. D., Norristown.
1901—Gates, W. D., M. D., Indiana.
1904—Gay, H. M., M. D., 1687 N. 54th Street, Philadelphia.
1892—Gerberich, D. P., M. D., Lebanon.

1905—Gerberich, M. B., M. D., 428 Cumberland Street, Lebanon.
1886—Gerhart, Jos. M., M. D., 1127 Mt. Vernon Street, Philadelphia.
1904—Gerhart, Weber L., M. D., 36 S. 3d Street, Lewisburg.
1879—GETZE, G. M., M. D., Tarentum.
1891—Gilbert, Irwin B., M. D., 2027 Columbia Ave., Philadelphia.
1894—Gittens, Theodore P., M. D., 1716 Diamond Street, Philadelphia.
1905—Gladwin, F. E., M. D., 2204 N. 17th Street, Philadelphia.
1891—Goff, Ella D., M .D., Library Place, N. Diamond Street, E. Allegheny.
1903—Golden, G. Morris, M. D., 1449 Venango Street, Philadelphia.
1875—GOODNO, W. C., M. D., 1603 Walnut Street, Philadelphia.
1883—GRAMM, EDWARD M., M. D., 1833 Chestnut Street, Philadelphia.
1883—GRAMM, THEO. J., M. D., 846 N. Broad Street, Philadelphia.
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1895—Gregg, Edw. R., M. D., 334 S. Highland Ave., Pittsburg.
1889—Gregory, G. W., M. D., Troy.
1905—Greno, R. M., M. D., Arnold.
1905—Griffith, J. B., M. D., Lewistown.
1888—Griffith, Louis B., M. D., 2449 Columbia Ave., Philadelphia.
1905—Griggs, William B., M. D., 1449 N. 10th Street, Philadelphia.
1874—GUERNSEY, J. C., M. D., 1923 Chestnut Street, Philadelphia.
1886—Gundlach, F. C., M. D., 1722 Sarah Street, Pittsburg.
1894—Haas, George H., M. D., 121 N. 8th Street, Allentown.
1904—Hackney, Evan J., 400 N. 52d Street, Philadelphia.
1902—Haines, Edward Steel, M. D., Rutledge.
1885—Haines, O. S., M. D., 137 N. 15th Street, Philadelphia.
1896—Hall, P. Sharples, M. D., 1604 Arch Street, Philadelphia.
1904—Haller, George C., M. D., 4564 Wayne Ave., Philadelphia.
1887—Haman, W. A., M. D., 122 N. 8th Street, Reading.
1905—Hamilton, Samuel, Jr., M. D., Homœopathic Hospital, Pittsburg.

1904—Hammond, W. Nelson, M. D., 1424 Poplar Street, Philadelphia.
1898—Hammond, W. Wilson, M. D., 1420 Poplar Street, Philadelphia.
1883—HANCOCK, JOS., M. D., 1639 Columbia Ave., Philadelphia.
1899—Harner, D. W., M. D., 1930 Chestnut Street, Philadelphia.
1888—Harner, John E., M. D., 117 S. 5th Street, Reading.
1891—Harpel, F. E., M. D., 211 Ferry Street, Danville.
1904—Harpel, G. W., M. D., Mt. Carmel.
1884—HARRIS, D. R., M. D., 41 N. Jefferson Street, New Castle.
1904—Harry, F. M., M. D., Mount Joy.
1904—Hart, M. Russell Thayer, M. D., 3832 Germantown Ave., Philadelphia.
1904—Hartman, G. Willis, M. D., 1207 N. 3d Street, Harrisburg.
1883—HASSLER, W. A., M. D., 105 N. 8th Street, Allentown.
1893—Heath, L. R., M. D., Mercer.
1895—Heilner, H. F., M. D., Scranton.
1905—Heimbach, A. E., M. D., Renovo.
1905—Heimbach, J. M., M. D., Kane.
1883—HELFRICH, J. H., M. D., Allentown.
1899—Hendrixson, Lewis H., M. D., 5615 Wyalusing Ave., Philadelphia.
1892—Heritage, A. C., M. D., Jenkintown.
1904—Heritage, J. B., M. D., Langhorne.
1873—HERRON, C. D., M. D., 3505 Butler Street, Pittsburg.
1904—Hess, H. P., M. D., Pine Grove.
1902—Heysinger, Isaac W., M. D., 1521 Poplar Street, Philadelphia.
1892—Hill, E. H., M. D., Pittston.
1882—HOFMAN, C. H., M. D., 510 S. Highland Ave., Pittsburg.
1903—Holben, Malcolm D., M. D., Slatington.
1883—HOLBEN, M. J., M. D., Slatington.
1905—Holcombe, William B., M. D., 1509 Girard Ave., Philadelphia.
1905—Hollowell, James, M. D., Parkesburg.
1892—Holsberg, W. H., M. D., 927 Cumberland Street, Lebanon.
1904—Hood, Joseph R., M. D., Sewickley.
1905—Hoover, G. M., M. D., Lancaster.
1904—Howell, Frederick E., M. D., 307 N. 5th Street, Reading.
1889—Hoy, H. K., M. D., 1203 Fourteenth Street, Altoona.

1905—Huber, W. H., M. D., Edge Hill.
1905—Humes, James R., M. D., Hollidaysburg.
1905—Humes, John H., M. D., Hollidaysburg.
1904—Humphreys, E., M. D., 131 N. 15th Street, Philadelphia.
1905—Hunsicker, William C., M. D., 130 N. 18th Street, Philadelphia.
1905—Huston, Arthur F. P., M. D., 22 N. Diamond Street, W., Allegheny.
1886—Ingersoll W. K., M. D., 4008 Chestnut Street, Philadelphia.
1892—Irvin, Thomas A., M. D., Franklin.
1903—James, D. B., M. D., 2005 N. 12th Street, Philadelphia.
1867—JAMES JOHN E., M. D., 1521 Arch Street, Philadelphia.
1902—James John Edwin, Jr., M. D., 1833 Wallace Street, Philadelphia.
1889—Jamison, M. R., M. D., Greensburg.
1881—JOHNSON, THEODORE M., M. D., 200 Susquehanna Ave., Pittston.
1901—Johnston, Anna, M. D., 5115 Liberty Ave., Pittsburg.
1905—Johnston, J. E., M. D., 7035 Hamilton Ave., Pittsburg.
1892—Karsner, Charles W., M. D., 1320 S. Broad Street Philadelphia.
1881—KARSNER, DANIEL, M. D., 205 Tulpehocken Street, Germantown, Philadelphia.
1889—Kase, Edmund H., M. D., 1325 Girard Ave., Philadelphia.
1891—Kaufman, John, M. D., Hazleton.
1905—Kauffman, A. B., M. D., 28 E. Walnut Street, Lancaster.
1896—Keelor, J. G., M. D., 48th and Baltimore Ave., Philadelphia.
1902—Keen, George I., M. D., Reading.
1894—Kehler, B. Frank, M. D., 1708 N. 8th Street, Philadelphia.
1885—Keim, William H., M. D. 1716 N. 18th Street, Philadelphia.
1905—Keller, J. D., M. D., 139 Carlisle Street Hanover.
1905—Kessler, H. D., M. D., Altoona.
1905—Kiefer, W. J., M. D., Lebanon.
1904—Kiefer, J. D., M. D., Mt. Carmel.
1901—Kinney, C. Spencer, M. D., Easton.
1892—Kistler, A. L., M. D., N. E. Cor. 9th and Linden Streets, Allentown.
1897—Kistler, D. S., M. D., 307 S. Franklin Street, Wilkes-Barre.
1904—Kistler, Grant M., M. D., Lansford.
1904—Kistler, Horace E., M. D., 313 Main Street, Johnstown.

1904—Kistler, J. S., M. D., Shenandoah.
1904—Kistler, M. S., M. D., Shenandoah.
1905—Kistler, Seth W., M. D., Nanticoke.
1904—Kistler, W. F., M. D., Minersville.
1891—Kline, D. C., M. D., 5th and Chestnut Streets, Reading.
1905—Klock, H. A., M. D., Mahanoy City.
1891—Knauer, J. C., M. D., 233 S. 9th Street, Reading.
1899—Knerr, Bayard, M. D., 12th and Spruce Streets, Philadelphia.
1877—KNERR, C. B., M. D., 1833 Chestnut Stree, Philadelphia.
1872—KORNDŒRFER, AUGUSTUS, SR., M. D., 1728 Green Street, Philadelphia.
1896—Korndœrfer, Augustus, Jr., M. D., 142 N. 18th Street, Philadelphia.
1900—Kressley, J. A., M. D., New Tripoli.
1896—Krusen, Edward A., M. D., Collegeville.
1905—Lacy, Henry A., M. D., 743 N. 17th Street, Philadelphia.
1903—Lane, Nathaniel F., M. D., 1620 Green Street, Philadelphia.
1894—Lawrence, F. Mortimer, M. D., 1722 Chestnut Street, Philadelphia.
1888—Layman, Alfred, M. D., 1630 N. 18th Street, Philadelphia.
1887—Leake, E. N., M. D., Butler.
1884—LECKIE, J. W., M. D., Hazleton.
1894—Lentz, Levi R., M. D., Fleetwood.
1905—Leopold, H. P., M. D., 332 W. Chelten Ave., Philadelphia.
1905—Leslie, Edward C., M. D., 5815 Penn Ave., Pittsburg.
1905—Levis, George E., M. D., 1746 Orthodox Street, Philadelphia.
1894—Lichtenwalner, A. B., M. D., 2435 N. 7th Street, Philadelphia.
1895—Lindabury, A. A., M. D., Scranton.
1905—Locke, M. J., M. D., Bellefonte.
1905—Longwell, Demerest W., M. D., Tioga.
1904—Longwell, J. P., M. D., Wellsboro.
1904—Loos, Julia C., M. D., 705 N. 2d Street, Harrisburg.
1896—Lyle, William Howard, M. D., 1505 Girard Ave., Philadelphia.
1868—MACFARLAND, MALCOLM, M. D., 1805 Chestnut Street, Philadelphia.
1893—Macfarland, Duncan, M. D., 3924 Chestnut Street, Philadelphia.
1886—Maddux, D. P., M. D., 801 Madison Street, Chester.

1878—MALIN, WILLIAM H., M. D., 8408 Germantown Ave., Chestnut Hill, Philadelphia.
1905—Mann, S. S., M. D., Columbia.
1892—Mansfield, Harry K., M. D., 19 W. Chelten Ave. Germantown, Philadelphia.
1881—MANSFIELD, J. R., M. D., 5620 Germantown Ave., Philadelphia.
1904—Mantz, E. S., M. D., South Bethlehem.
1891—Marks, William F., M. D., 118 N. 9th Street, Reading.
1885—Marsden, Biddle R., M. D., Chestnut Hill, Philadelphia.
1883—MARSHALL, ANNA M., M. D., 1420 Chestnut Street, Philadelphia.
1891—Marshall, R. S., M. D., 424 Shady Ave., Pittsburg.
1905—Marshall, Watson, M. D., 424 Shady Ave., Pittsburg.
1899—Martin, Robert W., M. D., 1831 Chestnut Street, Philadelphia.
1877—MARTIN, W. J., M. D., 1712 Carson Street, S. S. Pittsburg.
1901—Martin, W. Joline, M. D., Wilkinsburg.
1905—Massey, Franklin F., M. D., Womelsdorf.
1904—Matlack, Thomas, M. D., 2356 E. York Street, Philadelphia.
1878—MAURER, J. M., M. D., Washington.
1905—McCauley, E. S. H., M. D., Beaver.
1891—McCauley, J. C., M. D., 128 Connecticut Street, Rochester.
1879—McCLELLAND, J. B., M. D., 409 Penn Ave., Pittsburg.
1867—McCLELLAND, J. H., M. D., 5th and Wilkins Ave., Pittsburg.
1884—McCLELLAND, R. W., M. D., 5th and Wilkins Ave., Pittsburg.
1883—McCLURE, ELIZA H. LANG, M. D., 1919 Wallace Street, Philadelphia.
1893—McCracken, William, M. D., 2110 Carson Street, Pittsburg.
1903—McDowell, A. S., M. D., 155 N. 5th Street, Reading.
1888—Mercer, Edward W., M. D., 1705 Arch Street, Philadelphia.
1871—MERCER ROBERT P., M. D., 223 W. 3d Street, Chester.
1905—Mercer, Warren C., M. D., 1705 Arch Street, Philadelphia.
1896—Merrell, A. F., M. D., Hallstead.
1905—Metzger, Irwin D., M. D., Tyrone.
1871—MIDDLETON, CALEB S., M. D., 1523 Girard Ave., Philadelphia.

1904—Miller, C. R., M. D., Steelton.
1904—Miller, M. L., M. D., Mohnsville, Mohn's Store P. O.
1905—Miller, Seth S., M. D., Susquehanna.
1887—Miller, Z. T., M. D., 2013 Carson Street, S. S., Pittsburg.
1900—Minahan, Thomas, M. D., Carnegie.
1883—MITCHELL, J. N., M. D., 1505 Spruce Street, Philadelphia.
1875—MOHR, CHARLES, M. D., Lawnton Ave., above Oak Lane, Philadelphia.
1893—Monroe, J. E., M. D., Orange, Mass.
1893—Moon S. B., M. D., 1314 Eighth Ave., Beaver Falls.
1901—Moore, J. E., M. D., Coraopolis.
1893—Moreland, George B., M. D., Smith Block, Pittsburg.
1901—Morrow, Emory H., M. D., Altoona.
1891—Mueller, G. A., M. D., Empire Bldg., Liberty Ave. and 5th Street, Pittsburg.
1888—Murdock, Robert, M. D., 160 S. Main Street, Wilkes-Barre.
1901—Muth, F. L., M. D., Wilmerding.
1894—Myers, Charles Elwood, M. D., 170 Green Lane, Manayunk, Philadelphia.
1904—Nicholson, Harland C., M. D., 2000 Wallace Street, Philadelphia.
1901—Nicholson, H. S., M. D., 621 Arch Street, Allegheny.
1893—Northrop H. L., M. D., 1729 Arch Street, Philadelphia.
1905—Nuss, W. W., M. D., Wissinoming.
1898—Palen, Gilbert J., M. D., 1831 Chestnut Street, Philadelphia.
1896—Palmer, Charles R., M. D., West Chester.
1904—Palmer, Wayland R., Hollidaysburg.
1884—PARKER, G. W., M. D., 1404 S. 6th Street, Philadelphia.
1883—PARKER, T. ELWOOD, M. D., Woodbury, N. J.
1870—PARSONS, ANSON, M. D., Springboro.
1881—PARSONS, E. C., M. D., 275 Walnut Street, Meadville.
1897—Paxson, O. H., M. D., 1733 Arch Street, Philadelphia.
1880—PEACH, WILLIAM, M. D., 58 Monterey Street, Allegheny.
1900—Peck, John L., 332 Washington Ave., Scranton.
1881—PERKINS, C. W., M. D., 403 Broad Street, Chester.
1883—PETTINGILL, ELIZA F., M. D., 300 N. 10th Street, Philadelphia.
1891—Phillips, Joseph R., M. D., 15 E. 8th Street, Erie.
1897—Piper, R. L., M. D., Tyrone.
1905—Piper, William Scott, M. D., Clearfield.

1880—PITCAIRN, HUGH, M. D., 206 State Street, Harrisburg.
1895—Pitcairn, R. C., M. D., 5518 Ellsworth Ave., Pittsburg.
1894—Pollock, Martha H., M. D., 210 Pine Street, Harrisburg.
1891—Pond, Edward H., M. D., Smith Block, Pittsburg.
1886—Posey, L. P., M. D., 1435 Walnut Street, Philadelphia.
1896—Powel, Franklin, M. D., Madison and 5th Streets, Chester.
1883—POWELL, W. C., Jr., M. D., Bryn Mawr.
1871—PRATT, TRIMBLE, M. D., Media.
1900—Prizer, E. T., M. D., Lancaster.
1896—Pursell, James P., M. D., 419 Connell Bldg., Scranton.
1904—Quackenbush, F. B., 4700 Chester Ave., Philadelphia.
1901—Ramsey, H. E., M. D., 713 Arch Street, Allegheny.
1897—Raue, C. Sigmund, M. D., 1626 Walnut Street, Philadelphia.
1883—READING, J. H., M. D., 1811 Green Street, Philadelphia.
1886—Reading, L. W., M. D., 1629 Green Street, Philadelphia.
1888—Reading, Thomas, M. D., Hatboro
1896—Redman, John L., M. D., 1336 Spruce Street, Philadelphia.
1886—Reeves, Joseph M., M. D., 1525 Spruce Street, Philadelphia.
1905—Reich, George R., M. D., Marietta.
1904—Reitz, J. J., M. D., Walnutport.
1905—Rhodes, C. M., M. D., 914 N. 6th Street, Harrisburg.
1904—Richards, Charles M., M. D., 13 N. 9th Street, Reading.
1905—Richards, F. L., M. D., Berwyn
1896—Ridge, Jonathan T., M. D., 1617 N. 7th Street, Philadelphia.
1878—RINEHART, C. C., M. D., 4637 Centre Ave., Pittsburg.
1894—Rinehart, S. M., M. D., 293 Western Ave., Allegheny.
1880—ROBSON, J. W., M. D., 350 Winebiddle Ave., Pittsburg.
1904—Rochester, J. R., M. D., 863 N. 7th Street, Philadelphia.
1905—Roscoe, H. A., M. D., Diamond Bank Building, Pittsburg.
1905—Rosenberger, Henry D., M. D., Manheim.
1883—ROSSEAU, L. G., M. D., 118 S. Negley Ave., Pittsburg.
1905—Roth, William F., M. D., Wilkes-Barre.
1894—Rotzell, W. E., M. D., 200 S. 40th Street, Philadelphia.
1888—Sandel, J. H., M. D., 49 Centre Ave., Plymouth.
1905—Sanderson, H. H., M. D., Johnstown.
1872—SARTAIN, HARRIET J., M. D., 212 W. Logan Square, Philadelphia.
1905—Satchell, William F., M. D., Freemansburg.
1901—Sawers, F. C., M. D., 5130 Second Ave., Pittsburg.

1896—Schantz Henry F., M. D., 402 N. 5th Street, Reading.
1892—Schantz, M. Hassler, M. D., 402 N. 5th Street, Reading.
1883—SCHREINER, EMMA T., M. D., Cor. Wayne and Maplewood Aves., Germantown, Philadelphia.
1886—Seibert, W. A., M. D., 43 N. 4th Street, Easton.
1900—Seibert, Walter W., M. D., 43 N. 4th Street, Easton.
1868—SEIP, C. P., M. D., 316 N. Highland Ave., Pittsburg.
1905—Seip, Herman H., M. D., 316 N. Highland Ave., Pittsburg.
1905—Seitz, W. C., M. D., Glen Rock.
1889—Shallcross, I. G., M. D., 1631 Arch Street, Philadelphia.
1879—SHANNON, S. F., M. D., Sewickley.
1905—Sharbaugh, W. J., M. D., 607 24th Street, Altoona.
1885—Shellenberger, C. N., M. D., 615 N. Trejohn Street, Colorado Springs, Colo.
1905—Shinn, Chas. T., M. D., 17 E. Penn Street, Norristown.
1905—Shower, John A., M. D., 104 S. Beaver Street, York.
1903—Shute, A. Clement, M. D., 421 High Street, Pottstown.
1900—Simmons, C. W., M. D., 1628 N. 18th Street, Philadelphia.
1897—Simmons, S. S., M. D., Susquehanna.
1905—Simpson, K. S., M. D., Carnegie.
1883—SLOUGH, F. J., M. D., 120 N. 8th Street, Allentown.
1892—Smedley, Charles D., M. D., Wayne.
1902—Smith, Alfred G., M. D., 1066 E. Montgomery Ave., Philadelphia.
1889—Smith, George W., M. D., 806 N. Broad Street, Philadelphia.
1887—Smith, Mary E., M. D., 48 E. Diamond Street, Allegheny.
1887—Snader, E. R., M. D., 1919 Arch Street, Philadelphia.
1900—Snyder, E. S., M. D., Lancaster.
1904—Snyder, L. A., M. D., Ashland.
1894—Somerville, W. H., M. D., 1214 Hanover Street, Philadelphia.
1896—Spahr, Charles E., M. D., 10 W. Market Street, York.
1904—Speakman, William W., M. D., 1831 Chestnut Street, Philadelphia.
1889—Spencer, William, M. D., 1820 Chestnut Street, Philadelphia.
1881—STAMBACH, H. L., M. D., 15 W. Victoria Street, Santa Barbara, Cal.
1904—Steckel, E. K., M. D., Orwigsburg.
1894—Steele, William G., M. D., 1431 Girard Ave., Philadelphia.
1905—Steele, William, Jr., M. D., 2319 N. Broad Street, Philadelphia.

1891—Stephens, W. R., M. D., Wood Street, Wilkinsburg.
1904—Sterner, L. H., M. D., Porter's Sideling.
1894—Stewart, G. W., M. D., 1823 Chestnut Street, Philadelphia.
1903—Stewart, Wm. A., M. D., Lang and Thomas Aves., Pittsburg.
1901—Stitzel, J. W., M. D., Hollidaysburg.
1904—Straub, D. W., M. D., Bethlehem.
1904—Straub, E. L., M. D., Minersvile.
1905—Strock, Henry B., M. D., Bedford.
1885—Strong, J. Wilmer, M. D., 2049 N. 13th Street, Philadelphia.
1889—Strong, Walter, M. D., 2105 N. 13th Street, Philadelphia.
1904—Summers, Robert S., M. D., 2610 N. 12th Street, Philadelphia.
1904—Super, A. H., M. D., Tamaqua.
1896—Sureth, Theodore, M. D., 1821 N. Main Ave., Scranton.
1905—Sutton, John C., M. D., New Brighton.
1904—Swalm, T. W., M. D., Pottsville.
1901—Taylor, Amos O., M. D., 1415 12th Ave., Altoona.
1905—Taylor, G. P., M. D., Columbia.
1904—Tegtmeier, C. E., M. D., 1237 Shackamaxon Street, Philadelphia.
1905—Tegtmeier, C. F., M. D., Conshohocken.
1881—THATCHER, J. W., M. D., 35th and Hamilton Streets, Philadelphia.
1877—THOMAS, CHARLES MONROE, M. D., 1825 Chestnut Street, Philadelphia.
1886—Thompson, J. H., M. D., 515 Penn Ave, Pittsburg.
1897—Thompson, J. J., M. D., Carbondale.
1887—Thompson, Landreth W., M. D., 1701 Green Street, Philadelphia.
1898—Thurston, Leon, M. D., 333 Grand View Ave., Pittsburg.
1886—Tindall, Van R., M. D., 323 Reed Street, Philadelphia.
1891—Tomlin, R. E., M. D., 2057 N. 8th Street, Philadelphia.
1905—Tripp, E. T., M. D., 1046 Fifth Ave., Pitsburg.
1905—Tripp, J. C., M. D., Warren Centre.
1896—Trites, Charles S., M. D., 4500 Baker Street, Manayunk, Philadelphia.
1901—Tuller, John J., M. D., 1935 Chestnut Street, Philadelphia.
1896—Ulrich, Silvester, M. D., Middletown.
1881—UMSTEAD, D. B., M. D., Tacony, 23d Ward, Philadelphia.

1883—VAN BAUN, W. W., M. D., 1402 Spruce Street, Philadelphia.
1886—Van Deusen, Edwin H., M. D., 2101 Tioga Street, Philadelphia.
1896—Van Lennep, G. A., M. D, 1833 Chestnut Street, Philadelphia.
1881—VAN LENNEP, W. B., M. D., 1421 Spruce Street, Philadelphia.
1898—Van Tine, J Lewis, M. D., 1706 Girard Ave., Philadelphia.
1901—Varner, Anna D., M. D., 616 Wood Street, Wilkinsburg.
1889—Vischer, Carl V., M. D., 1429 Poplar Street, Philadelphia.
1902—Von Scheliha, Paul F., M. D., 333 S. 12th Street, Philadelphia.
1905—Waaser, J. F., M. D., E. Mauch Chunk.
1892—Waggoner, G. W., M. D., Corry.
1901—Wallace, H. D., M. D. 214 Lacock Street, E. Allegheny.
1897—Walter, J. A., M D., Punxsutawny.
1896—Walter, Robert, M. D., Walters Park.
1894—Ward, J. D. M. D., 806 S. 3d Street, Philadelphia.
1894—Ware, H. B, M. D., Cor. Washington and Linden Streets, Scranton.
1904—Walker, H. Ellen, M. D., Sharon.
1894—Wasserman, Flora E., M. D., 1909 N. Broad Street, Philadelphia.
1904—Watson, Franklin, M. D, Willow Grove.
1894—Waylan, Julia Gould, M. D., 1832 Tioga Street, Philadelphia.
1881—WEAVER, CHANDLER, M. D., Fox Chase, 23d Ward, Philadelphia.
1894—Weaver, H. S., M. D., 1621 Chestnut Street, Philadelphia.
1902—Weaver, W. A., M. D., 1534 Master Street, Philadelphia.
1883—WEAVER W. P., M. D., Bristol.
1894—Webster, Samuel C., M. D., Media.
1905—Wells, G. Harlan, M.D., 1623 Arch Street, Philadelphia.
1901—Welsh, Thomas, M. D., 2414 Carson Street, Pittsburg.
1905—Wendt, C. L., M. D., 117 S. Highland Ave. Pittsburg.
1891—Wesner, M. A., M. D., Houtzdale.
1905—Wesner, M. A., M. D., 407 Franklin Street, Johnstown.
1889—White, Roland T., M. D., 914 Western Ave. Allegheny.
1904—Wiest Harry G., M. D., Schuylkill Haven.
1892—Wilbur, B. K., M. D., Bryn Mawr.

1899—Wilford, H. H., M. D., Bangor.
1866—WILLARD, L. H., M. D., 236 Western Ave., Allegheny.
1870—WILLETS, WILLIAM, M. D., Williamsport.
1903—Williams, Harry E., M. D., Coatesville.
1905—Williams, Olin A., M. D., Butler.
1873—WILLIAMSON, M. S., M. D., 1311 Arch Street, Philadelphia.
1905—Wilson, M. A., M. D., 140 E. 8th Street, Erie.
1905—Witmeyer, H. C., M. D., Lebanon.
1904—Wooldridge, F. V., M. D., 408 2d Avenue, Pittsburg.
1904—Yale, Arthur W., M. D., 1901 Park Avenue, Philadelphia.
1905—Yeagley, J. H., M. D., 127 E. Market Street, York.
1905—Yeagley, J. M., M. D., 144 N. Prince Street, Lancaster.
1888—Yocum, C. A., M. D., 365 Chestnut Street, Pottstown.
1880—YODER, DANIEL, M. D., Catasauqua.
1894—Ziegenfus, A. Frank, M. D., 1124 Wallace Street, Philadelphia.

HONORARY MEMBERS.

1883—Allen, H. C., M. D., 5142 Washington Ave., Chicago, Ill.
1898—Custis, J. B. Gregg, M. D., 110 E. Capitol Street, Washington, D. C.
1866—Doran, Charles R., M. D., Jacksonville, Fla.
1876—Jones, S. A., M. D., Ann Arbor, Mich.
1900—Nash, E. B., M. D., Cortland, New York.
1883—Phillips, W. A., M. D., Cleveland, Ohio.
1898—Porter, Eugene H., M. D., 181 W. 73d Street, New York.
1892—Williamson, Alonzo P., M. D., Patton San Bernardino Co., Cal.

CORRESPONDING MEMBERS.

1873—Alvarez, Paz, M. D., Madrid, Spain.
1873—Chauvet, Fernand, M. D., Tours, France.
1873—Eidherr, Francis, M. D., Vienna, Austria.
1883—Hughes, Richard, M. D., Brighton, England.
1893—Pope, Alfred C., M. D., London, England.

NECROLOGICAL LIST.

1902—Adams, W. K., M. D., died July 17th, 1903.
1866—Ashton, A. H., M. D., died February 18th, 1883.
1899—Baker, Daniel J., died July 30, 1902.
1866—Barnaby, John E., M. D., died January 5th, 1869.
1867—Barrett, Charles B., M. D., died June 5th 1871.
1882—Bernard, H., M. D., died ———.
1903—Bigler, Bernard E., M. D., died February 20th, 1905.
1872—Bigler, William H., M. D., died December 10th, 1904.
1866—Blakeley, W. James, M. D., died January 14th, 1877.
1884—Boyd, G. S., M. D., died May 10th, 1901.
1870—Bratt, Benjamin R., M. D., died January 31st, 1872.
1895—Brierly, Frank Walter, M. D., died June 17th, 1899.
1866—Brooks, Silas S., M. D., died July 2d 1871.
1883—Brown, Samuel, M. D., died March 22d, 1892.
1891—Brown, Wm. K., M. D. died October 3d, 1900.
1885—Buchman, Francis, M. D., died July 14th, 1898.
1891—Burlingame, F. W., M. D., died ———.
1883—Burr, Richard, M. D., died March 30th, 1885.
1873—Caruthers, R. E., M. D., died January 3d, 1885.
1868—Charlton, S. T., M. D., died November 9th, 1886.
1863—Childs, William R., M. D., died November 11th, 1888.
1866—Cook, William H., M. D., died March 11th, 1879.
1866—Cooper, John F., M. D., died August 19th, 1899.
1866—Cote, M., M. D., died May 29th, 1878.
1866—Cowley, David, M. D., died October 30th, 1886.
1898—Cresson, Charles C., M. D., died ———.
1868—Dake, J. P., M. D. (honorary), died October 28th, 1894.
1866—Detweiler, Henry, M. D., died April 21st, 1887.
1886—Dowling, John W., M. D. (honorary), died January 14th, 1892.
1871—Dreibelbis, David L., M. D., died March 24th, 1872.
1878—Duff, P. S., M. D., died April 1st, 1904.
1870—Earhart, Jacob R., M. D., died June 23d, 1891.
1891—Ely, J., M. D., died ———.
1870—Farrington, E. A., M. D., died December 17th, 1885.

1880—Ferson, John L., M. D., died July 12th, 1896.
1866—Freise, Michael, M. D., died February 4th, 1880.
1866—Frost, J. H. R., M. D., died January 21st, 1875.
1889—Gangloff, Charles, M. D., died January 22d, 1898.
1866—Gardiner, Richard, M. D., died March 22d, 1877.
1866—Gause, O. B., M. D., died January 11th, 1895.
1899—Godshall, Samuel G., M. D., died April 4th, 1903.
1867—Gramm, Gustavus E., M. D., died November 2d, 1901.
1880—Griffith, Jethro J., M. D., died July 5th, 1893.
1881—Griffith, Silas, M. D., died May 21st, 1904.
1877—Griffith, Wm. M., M. D., died April 20th, 1903.
1877—Grumbeid, William, M. D., died ———.
1866—Guernsey, H. N., M. D., died June 27th 1885.
1870—Guernsey, W. F., M. D., died February 16th, 1877.
1867—Gumpert, B. Barton, M. D., died June 23d, 1904.
1895—Hall, William D., M. D., died August 2d, 1897.
1888—Hawley, S. B., M. D., died March 6th, 1890.
1868—Helmuth, William Tod, M. D. (honorary), died ———
1886—Herron, James A., M. D., died November 15th, 1868.
1866—Hofmann, Herman H., M. D., died April 4th, 1891.
1886—Holcombe, John Randolph, M. D., died December 17th, 1896.
1884—Hosfeld, George, M. D., died November 9th, 1884.
1873—Houard, J. G., M. D., died April 24th, 1878.
1885—Houghton, Henry C., M. D. (honorary), died ———.
1882—Ivins, Horace F., M. D., died January 1st, 1899.
1866—James, Bushrod W., died January 6th, 1903.
1866—James, David, M. D., died June 6th, 1873.
1866—Jeanes, Jacob, M. D., died December 18th, 1877.
1866—Koch, Augustus W., M. D., died May 4th, 1886.
1889—Lazear, Lyttleton L., M. D., died ———, 1898.
1866—Lee, J. K., M. D., died November 10th, 1887.
1869—Lee, John K., M. D., died May 31st, 1899.
1876—Lilienthal, S., M. D. (honorary), died October 3d, 1891.
1867—Lippe, Adolph, M. D., died January 23d, 1888.
1871—Lovejoy, E., M. D. (honorary), died August 15th, 1872.
1868—Malin, George W., M. D., died January 18th, 1883.
1886—Malin, John, M. D., died November 29th, 1889.
1866—Marsden, J. H., M. D., died August 27th, 1883.
1865—Martin, Henry Noah, M. D., died September 1st, 1889.
1881—May, Newton, M. D., died January 27th, 1889.

1866—McClatchey, R. J., M. D., died January 15th, 1883.
1887—Millen, J. C., M. D., died ———, 1901.
1870—Moore, Thomas, M. D., died March 25th, 1882.
1867—Morgan, John Coleman, M. D., died June 27th, 1899.
1866—Neville, W. H. H., M. D., died January 22d, 1904.
1873—Nichol, Thos., M. D. (corresponding), died June 14th, 1890.
1869—Ostrander, W. M., M. D., died August 23d, 1881.
1868—Paine, H. M., M. D. (honorary), died December 5th, 1903.
1868—Payne, Wm. E., M. D. (honorary), died March 9th, 1877.
1878—Pereira, Ignacio, M. D. (corresponding), died April 18th, 1881.
1894—Peters, J. Elwood, M. D., died ———, 1904.
1868—Pfoutz, J. S., M. D., died ———.
1866—Preston, Coates, M. D., died August 9th, 1881.
1868—Pulte, J. H., M. D. (honorary), died February 24th, 1884.
1882—Pursel, J. E., M. D., died March 15th, 1885.
1872—Rankin, John Stephen, M. D., died April 21st, 1899.
1866—Raue, Charles G., M. D., died August 21st, 1896.
1853—Reading, Edward, M. D., died March 7th, 1889.
1866—Reading, John R., M. D., died February 14, 1866.
1870—Reinhold, H. E., M. D., died March 6th, 1879.
1871—Rittenhouse, S. R., M. D., died June 26th, 1895.
1895—Roberts, C. W., M. D., died March 20th, 1903.
1866—Roberts, R. Ross, M. D., died April 4th, 1875.
1887—Rodes, Joseph, M. D., died ———, 1898.
1866—Rosseau, L. M., M. D., died September 25th, 1882.
1874—Schmucker, Francis R., M. D., died ———.
1872—Scott, James L., M. D., died August 15th, 1876.
1883—Sharkey, W. P., M. D., died August ———, 1903.
1892—Shoemaker, D. W., M. D., died April 27th, 1904.
1883—Skeels, James S., M. D., died ———, 1891.
1880—Smedley, Isaac G., M. D., died December 1st, 1899.
1870—Spencer, J. H., M. D., died ———.
1872—Speth, W. F., M. D., died May 11th, 1881.
1889—Starr, Pearl, M. D. died July ———, 1900.
Stauffer, D. R., M. D., died March 16th, 1874.
1867—Stevens, C. A., M. D., died January 17th, 1881.
1868—Talbot, I. Tisdale, M. D. (honorary), died July 2d 1899.
1870—Taudte, F., M. D., died March 27th, 1878.
1902—Taylor, William Gardiner, M. D., died March 4th, 1904.

1871—Thomas, Amos R., M. D., died October 31st, 1895.
1891—Tindall, Harry Brooks, M. D., died January 9th, 1892.
1882—Trites, W. B., M. D., died January 19th, 1890.
1867—Walker, Mahlon M., M. D., died March 31st 1896.
1870—Waters, George H., M. D., died ———, 1892.
1880—Way, J. H., M. D., died September 3d, 1887.
1866—Williams, Thomas C., M. D., died October 1st, 1899.
1866—Williamson, Walter M., M. D., died December 19th, 1870.
1866—Williamson, Walter, M. D., died May 5th, 1874.
1868—Wood, James B., M. D., died April 14th, 1889.
1904—Yerkes, Frank E., M. D., died December 22d, 1904.
1897—Yetter, A. F., M. D., died May 8th, 1898.
1874—Young, J. H., M. D., died June 21st, 1894.
1880—Zerns, Wm. M., M. D., died September 21st, 1887.

MEMBERS AND VISITORS REGISTERED AT THE MEETING.

A. B. Arthur.
L. T. Ashcraft.
A. L. Baker.
Mrs. A. L. Baker.
H. B. Barclay.
C. W. Bartine.
J. E. Belville.
B. F. Betts.
N. S. Betts.
A. W. Bevenham.
J. T. Biddle.
H. Bierman.
Mrs. H. Bierman.
C. F. Bingaman.
E. C. Blackburn.
Mrs. E. C. Blackburn.
Daniel Bohn.
Mrs. D. Bohn.
J. D. Boileau
B. F. Books.
F. W. Boyer.
Mrs. F. W. Boyer.
E. W. Brickley.
W. C. Browne.
C. J. Bromley.
M. J. Buck.
Mrs. M. J. Buck.
T. L. Chase
Hills Cole.
Mary A. Cooke.
W. D. Culin.
J. W. Dehoff.
D. C. Dick.
W. G. Dietz.
S. W. S. Dinsmore
W. F. Edmundson.
H. J. Evans
P. F. Felsburg.
M. M. Fleagle.
F. A. Ford.
H. W. Fulton.
A. R. Garner.
H. M. Gay.
M. B. Gerberich.
I. B. Gilbert
Mrs. I. B. Gilbert
F. E. Gladwin.
S. P. Glover.
Ella D. Goff.
Mrs. M. B. Goff.
G. M. Golden.
E. M. Gramm.
T. J. Gramm.
Mrs. T. J. Gramm.
E. R. Gregg.
G. H. Haas.
E. S. Haines.
O. S. Haines.
G. C. Haller.
T. C. Hare.
F. E. Harpel.
G. W. Harpel.
R. T. Hart.
Mrs. R. T. Hart.
A. E. Heimbach.
J. M. Heimbach.
R. J. Hillis.
W. H. Holsberg.
Mrs. W. H. Holsberg.
J. R. Hood.
F. E. Howell.
H. K. Hoy.
Mrs. H. K. Hoy.
J. R. Humes.
J. W. Humes.
E. Humphreys
J. E. James.
Anna Johnston.
J. D. Keller.
Mrs. J. D. Keller
H. D. Kessler.
C. S. Kinney
H. E. Kistler
J. S. Kistler

Mrs. J. S. Kistler.
M. S. Kistler.
Mrs. M. S. Kistler.
W. F. Kistler.
D. C. Kline.
Mrs. D. C. Kline.
Rada Kline.
Aug. Korndœrfer, Sr.
H. P. Leopold.
M. J. Locke.
Charles Long.
D. W. Longwell
J. F. Longwell.
Julia C. Loos.
D. P. Maddux.
W. K. Maglaughlin.
S. S. Mann.
Watson Marshall.
W. J. Martin.
Miss Mame McCamant.
R. W. McClelland.
W. C. Mercer.
F. W. Messerve.
I. D. Metzger.
Z. T. Miller.
G. B. Moreland.
Mrs. G. B. Moreland.
E. H. Morrow.
Mrs. E. H. Morrow.
J. B. Muckle.
H. L. Northrop.
Miss H. Ogden.
W. R. Palmer.
O. H. Paxson.
C. W. Perkins.
H. R. Pierce.
R. L. Piper.
Mrs. R. L. Piper.
W. S. Piper.
W. C. Powell.
Mrs. K. B. Pratt.
J. W. Pratt.
Mrs. Trimble Pratt.
C. S. Raue.
T. R. Rich.
C. M. Richards.
C. C. Rinehart.
G. C. Robb.
W. S. Ross.
C. C. Roth, D. D.
J. W. Rowe.
E. W. Runyon.
J. H. Sandel.
H. F. Schantz.
C. W. Scudder.
W. A. Seibert.
C. P. Seip.
W. J. Sharbaugh.
G. W. Smith.
E. R. Snader.
L. H. Sterner.
W. A. Stewart.
J W. Stitzel.
Mrs. J. W. Stitzel.
G. W. Stratton.
E L. Straub.
A. H. Super.
Mrs. A. H Super.
J R. Swartz.
A. C. Taylor
Mrs. A. O. Taylor.
C. M. Thomas.
Mrs. C. M. Thomas.
J. C. Tripp.
J. J. Tuller.
H. S. Turner.
G A. Van Lennep
Anna D. Varner.
W. M. Veale.
H. B. Ware.
J. G. Watson.
Chandler Weaver.
Mrs. Chandler Weaver.
H. S. Weaver.
M. A. Wesner.
H. K. White.
G R. Wickham.
H. E. Williams.
A. W. Yale.
C. A. Yocom.

PAPERS

AND

DISCUSSIONS.

REPORT OF THE

SECTION OF PÆDOLOGY.

The Causes and Treatment of Infantile Eclampsia, by F. E. Howell, M. D.
Tuberculosis in Children, by Blanche H. Jackson, M. D.
Marasmus, by Anna Johnston, M. D.
The Physician's Role in Child Development, by I. D. Metzger, M. D.
Abdominal Diagnosis in Children, by C. S. Raue, M. D.

THE CAUSES AND TREATMENT OF INFANTILE ECLAMPSIA.

F. E. HOWELL, M. D., READING.

Convulsions of infancy or infantile eclampsia are attacks of motor disturbances due to various causes, and represented by continuous rigidity or contractions of one or more groups of muscles lasting for a variable time, and usually accompanied by unconsciousness. In infants they are to be looked upon as symptoms not as a disease.

They may be classified as to type into tonic and clonic; as to form into general and partial; as to seat of irritation into central and peripheral. The probable lesion may be a hyperæmic or an anæmic condition of the motor areas of the brain.

The clonic convulsion is an active, spasmodic contraction of the muscles followed by immediate relaxation. Epilepsy is an example of this.

The tonic convulsion is a more or less continued spasmodic rigidity of the muscles. Such are seen in tetanus neonatorum.

The seat of irritation is varied. It may be a lesion of the central nervous system, or of the peripheral nerves, *i. e.*, central or reflex.

Convulsions are much more apt to occur in infancy than in later childhood and adult life, owing to markedly increased excitability of the lower reflex centres of the nervous system and the poor development of the higher inhibitory centres. We, therefore, not only meet with convulsive attacks more frequently in early life; but, as

a rule, are led to look upon them as of less import than in adult life. The reason for this is that the causes of infantile convulsions are innumerable, and, as a rule, do not result seriously, as in the adult, where they most always represent a central lesion.

The various acute diseases accompanied by high temperature, such as pneumonia and the exanthemata, are commonly preceded by a convulsion.

But we must not be misled into forming the rule that convulsions in infancy are not fatal because of their frequency and often benign character. We can never be sure that we have a benign form until we have eliminated all serious organic lesions as a cause. The convulsion itself does not show us whether it is a symptom of serious disease or not. The convulsion from a central lesion, such as cerebro-spinal meningitis, may differ in no way from that due to some simple cause as indigestible food.

The most important are those of central origin. They may occur in any disease having a high temperature, as meningitis, pneumonia and the exanthemata, or other diseases. In these cases the convulsion may be produced by the action of the high temperature on the motor areas, or by the direct action of the toxic agents causing the disease. These convulsions, as a rule, are general, caused by the diffuse action of the poison. There is probably an externally hyperæmic condition of the blood vessels of the brain. Convulsions may also be produced by a vascular stasis and a normal or subnormal temperature, as in pertussis or cardiac disease, or from an anæmic condition of the blood vessels of the brain as in exhausting diarrhœas or from loss of blood. Drugs, as Belladonna, mental disturbance, as sudden fright, may produce convulsion. They may be partial or clonic, though, as a rule, they are general, due to the diffuse irritation.

Local lesions, as morbid growth, embolus, thrombosis and hæmorrhage, may be the cause of general convulsions, though, as a rule, they are localized or hemiplegic in character.

Convulsions of peripheral or reflex origin may arise from almost any source. Rachitis is an extremely common cause, laryngismus stridulus being the form here. Irritation from trauma elsewhere in the body, from renal, hepatic or intestinal colic, undigested food, phimosis, foreign body in the ear, dentition and worms, and some cases may be looked upon as idiopathic.

The most common cause of reflex convlusion is improper food;

even in infants who are fed from the breast the convulsion may be due to too high a percentage of proteids or some disturbance of the mammary function.

The irritation of teeth, during their development as a cause of itself, is questioned by many observers, though there is no doubt a higher state of nervous excitability during dentition. Hot baths may be a source of convulsion.

In the treatment of convulsion the bath in which the infant is immersed should not be too hot. In one case I had recently the bath was not only too hot for the action desired, but while it appeared all right to the parents and only warm, as they termed it, it not only increased the severity of the convulsions, but was severe enough to scald the child and hasten materially its death. The temperature of the bath should always be taken and the child removed before recovering consciousness, as the fright of the bath may cause a recurrence of the convulsion. Mustard added to the water in the form of a foot-bath is a great help at times ice packs being applied to the head at the same time. The ice pack to head is useless unless there is high temperature. It is best to keep the child quiet, and all rubbing and unnecessary manipulation forbidden. The warm mustard bath or pack may be used.

The thorax should be examined for pulmonary or cardiac lesions, and inquiries made regarding the diet and previous condition of the child. The temperature should be taken and the fontanelles examined for bulging.

As it is almost impossible to make any headway in a search for the cause during a convulsion I usually resort to the use of an anæsthetic at once, chloroform or ether, preferably the latter, and empty the bowel by enemata, determining as soon as possible the internal remedy to be used.

If the spasms are of frequent occurrence with short intermissions, I sometimes make use of the rectal injection of 5 to 10 grains of Potassium bromide, and 1 to 3 grains of Chloral hydrate to an ounce of warm water, repeated every hour for four doses if necessary. Hypodermic injections of Morphia sulph., $^1/_{100}$ to $^1/_{60}$ of a grain, may be used if the case seems to be nearing a fatal termination. In the class of cases caused by loss of blood, an anæmic condition, exhaustive diarrhœas and heart disease, and those with venous stasis and low temperature, stimulants may be given with good results. In exhaustive diarrhœas the appearance of convul-

sions in the later stages is always an indication to me of an approaching fatal termination. In these cases I make use of saline enemas after each stool, allowing some solution to be retained; they are not only soothing, but, I believe, appreciable amounts of the solution are absorbed. I also believe in the use of salines by hypodermoclysis in these cases.

The homœopathic remedies are too well known to need repetition here. I use frequently such remedies as Aconite, Apis Belladonna, Chamomilla, Cicuta vir., Cina, Hyoscyamus, Nux, and Veratrum.

I take it that I have only been repeating what is common knowledge to all of us. But these things will bear repetition. It seems to me that a number of physicians have selected some one particular cause for convulsions, and are given to treating cases with this pet hobby continually in the foreground. Yet a little observation will prove that the causes are innumerable, and in a great many cases not in keeping with the symptoms produced. The cause should be searched for carefully and thoroughly and eliminated as soon as possible.

I also wish to emphasize the importance of controlling the attacks as quickly as possible, as the convulsions alone may cause death from exhaustion.

I very seldom find that an anæsthetic is not a speedy and safe controller of the spasms, and I make systematic use of it.

The convulsions controlled and the possible cause removed, attention should be directed to toning up the little patient to resist a recurrence, for in the weakened state following these attacks influences which seem extremely slight may cause a return of the convulsive seizure

In closing, I will cite two cases which I think will fairly illustrate some of the points I have employed in this paper.

The first, a child 2 years old, had never had convulsions nor any other trouble. She was suddenly taken with convulsions in the evening. On my arrival I found high temperature, $103^{2}/_{5}^{\circ}$, convulsions lasting from twenty minutes to an hour, followed by sleep. After awhile she would awake with a piercing shriek. The head would then be thrown back, the eyes squint and body stiffen; hands and feet would be cold, the head hot face red. She would quickly develop clonic contractions, the head being turned to the right, the eyeballs, jaws, hands and feet twitching. The bowels would move

suddenly, and child would sweat profusely on the head; breathing was shallow and hurried; urine passed in small quantities, etc. I give enough symptoms to show that I was well warranted in giving Apis, which I did, but with no result. I kept the child under chloroform during the following convulsions and did what I could to discover the cause. I finally flushed the bowel with a large injection of soapy water with the result that a large portion of the bowel was distended and cleansed, the child passing a piece of broom splint an inch and a half in length. The convulsion ceased and there was no recurrence The lesson here is obvious.

The second case, a boy 18 months old, was taken with violent convulsions in the night. On being called I found the convulsions very close together, the abdomen distended, and bowels had not moved. I learned that during the previous day the child had eaten half of a Dill pickle, which he had snatched from his brother's hand. I injected the bowel and the pickle came away undigested. The child quieted down for the night. The next day he had convulsions again. Of course, at this time I gave such remedies as Bell., which controlled fever and allayed the symptoms somewhat. I then gave castor oil with the result that there were no more convulsions for that day. I continued the administration of Bell., and gave Nux in alternation. There was no convulsion for three days, when I was again called. The child it was said, had eaten a small piece of candy Whether this caused the recurrence or not the previous methods of treatment failed this time to relieve. By use of the mustard bath, ice pack, chloral and bromides, per rectum, and the administration of chloroform the convulsions were aborted in some instances and controlled in others. However, they still continued. I gave Santonine 1x for the bowel irritation, but without effect. The symptoms at this time were: Child cries for things which he refuses or throws away as soon as given to him; strikes at his mother; angry, yelling, and at other times fretful, crying; cannot bear to be touched; wanted to be nursed, but did not want to be carried; seemed miserable all the time; would lie with head turned to one side. The face was pale and bluish at times around the lips; dark rings around the eyes. The child would swallow continually; desire to eat, but eating seemed to cause pain at once; abdomen was hard, and somewhat distended; stools were watery; pulse was weak, and child had slight cough. Examination of chest revealed no diagnostic symptoms. The symptoms can be verified by Dr. Harner.

who saw the child at this time, and we were both more certain every time we talked over the symptoms that Cina was the remedy; nevertheless, administered low, high and medium it seemed to have little effect save to relieve the angry symptoms. I tried Cham., owing to the similarity between these drugs, but the convulsions continued. The child would tremble between attacks: had a great many more attacks in the night; the convulsions assuming more of the epileptiform variety. He was growing weaker daily. Finally being convinced that there must be some chest trouble, I packed the chest in antiphlogistine for two days and nights renewing the dressing every twelve hours, and gave Hepar 6x. By the end of the second day the convulsions had ceased entirely, the cough was loose, and quite a little muco-purulent expectoration. The glands of the neck were swollen soon after this, but went down gradually under Merc. The child has since had no signs of trouble. The cough is lessening, and he is getting stronger daily. I have brought these cases before you to-night because of their similarity in this one thing. Both cases seemed to have clearly indicated Homœopathic remedies, yet both cases needed something in addition. It behooves us, therefore, not to be always so sure of the similimum but to have other resources to which we may turn when the remedy alone does not work, as procrastinating may lose us a patient in such cases.

DISCUSSION.

Dr. B. F. Betts: The doctor has called our attention to the importance of ascertaining the cause of convulsions. I think there is one rule that would modify in great measure the resort to hot baths. If a patient is very anæmic, and has perhaps some intestinal irritation I do not think the hot baths are appropriate. I would a good deal rather supply heat to the head under such circumstances and try to get a determination of blood in that direction. Of course, in the opposite condition hot baths are very appropriate and efficient, but there are cases in which the hot bath is not appropriate, and those are cases in which there is marked anæmia, especially cerebral.

Dr. S. W. S. Dinsmore: I want to relate a case that brings forcibly to our minds the necessity of trying to ascertain the cause of spasms. About a month ago I was called to see a child

about seven months old. It was having spasms, and it had had them for about an hour. I could get very little information from the parents. There was a neighbor woman who could talk a little English, but all she could say was they had appeared suddenly. I looked the baby over, looked at its outlets, and all that sort of thing. It was quite cyanotic, jerking and twitching very much, and not at all in a condition to give medicine to. I thought of giving it a little chloroform, and gave it just a little, and away it went, and I thought it was dead. It turned bluer than ever. The next thing I did was to take it up by the clothes and invert it. Something dropped on the floor, and I found that an older child had gone to the store, bought a penny candy bag with one of the old-fashioned pencil sharpeners, and stuck it down the child's throat. If I had not given the child chloroform I would not have inverted it, and if I had not inverted it I would not have discovered the cause of the trouble.

DR. C. P. SEIP: That rather forcibly illustrates the fact that sometimes we make a diagnosis and do not know how we get it. In my early years of practice I found a child that had been sick four days, and had recurring spasms, four or five a day, and every day it had had another doctor. It was on Friday morning that I was called in. I asked if the child ever had sore throat. I made several efforts to get a look at its throat. The tongue seemed fairly clear, but there was a terrible odor from the mouth. I did not like to put my finger in, and could not very well get a spoon in. Eventually I got the jaw open sufficiently to get my finger down and make the child gag. It vomited about a handful of peanuts it had eaten five days before. There were no more convulsions.

TUBERCULOSIS IN CHILDREN.

BLANCHE H. JACKSON, M. D., DUQUESNE.

It was at one time thought that tuberculosis was a disease rarely if ever found in early life. The diseases of children in general were not made a special study until the last few years, and while there was a certain knowledge among the profession of the characteristics of tuberculosis its manifestations in the child were often overlooked.

It has come of late, however, to be recognized as a very prevalent affection in early life.

While exceptionally infrequent in the newborn and during the first three months of life, it is often seen during the latter part of the first year and during the second, gradually growing less frequent as puberty approaches. It is believed by some authorities that it is less frequently found in American children than those of foreign parentage. This may be accounted for by the fact that our American children are brought up under better sanitary surroundings.

A predisposition to the disease may be hereditary or acquired—hereditary in that the child may inherit tissues which are more or less receptive to the tubercle bacillus, and provide a favorable medium for its development, and acquired in that after certain infectious diseases such as measles, whooping-cough epidemic influenza, etc., the system is left so depleted that the germ easily gains an entrance Where the predisposition is inherited the parents themselves have frequently suffered from it or have been weakened as a result of syphilis, alcoholism or some other constitutional vice, and the child's surroundings, if unsanitary (as is so frequently found in our crowded districts), is an additional cause which favors the development of the disease. Any pathological condition of the mucous membrane or organs most exposed to infection, may create an acquired predisposition. Repeated attacks of bronchitis or pneumonia, and chronic catarrhal inflammations of the mucous membranes of the nose or pharynx so often found with enlarged tonsils and adenoids favor this acquired predisposition.

As regards the possibility of intrauterine infection authorities differ. Holt in his "Diseases of Infancy and Childhood," claims that intrauterine infection is highly probable in children born of tubercular mothers, where the infant develops the disease early, although there may be no evidence of it at birth. He speaks of one child which developed the disease and died when twenty days old, it having been prematurely born of a mother in the advanced stages of tuberculosis. An autopsy on the mother showed tuberculosis of the endometrium. In this case the infection of the child must have taken place before birth. Many cases are on record also of direct infection through close exposure to tubercular nurses or other tubercular persons. An entrance to the system is generally gained through the respiratory tract, the alimentary tract or the skin, al-

though the latter mode of infection is very rare. In infancy as in adult life, infection usually takes place through the respiratory tract. The younger the child the more likely is tuberculosis to be located in the lung, later the lymph glands and meninges, and still later the peritoneum, intestines and joints.

The pathology of tuberculosis in children is very similar to that of adults. The pulmonary lesions, though, are more widely diffused, and in children dying of the disease the younger the child the more widely diffused are the lesions.

When a tissue is entered by the germ, the characteristic lesions of the disease are usually produced. Probably the germs enter the circulation in small numbers and are carried to various tissues, as the bones or joints, where it may appear as a primary infection. Frequently the bacilli, without making any apparent lesion at the point of entry, get into the lymphatics and are carried to the lymph glands where the disease first appears. The bacilli generally lodge first in the bronchial lymph nodes, probably on account of the favorable conditions for entrance existing in the bronchi and lungs.

A very common form of tuberculosis of the lymph nodes is that of the cervical glands, formerly known as scrofula. It is frequently found in children, but is quite rare in young infants. Between the ages of three and ten it is more apt to be found than at any other time. It often exists as the only tubercular lesion of the body. Children who have a hereditary predisposition to tuberculosis or glandular enlargements are more liable to be affected than others. Acute infectious diseases as measles, scarlet fever and diphtheria are often an exciting cause. When there is a scrofulous tendency present there are also often eruptions of the skin, which are long in healing. The glandular enlargement is, in most cases, quite slow and painless and comparatively free from any local tenderness. Sometimes one gland only is affected, but frequently several are involved. The enlargement is quite chronic, and the tumor may remain for months giving the child no inconvenience, and often without any pain or tenderness. Sometimes the gland takes on an inflamed condition and proceeds to suppuration. The better the child's health and the older the child the better the chances for a gradual disappearance of the disease. Tuberculosis of the external lymph glands rarely results fatally. This child gradually outgrows the tendency, and, as a general thing, no other tubercular lesions develop. A glandular enlargement not of a strumous nature

is sometimes found in children. In it the symptoms are all acute and the gland rapidly goes on to suppuration, while the tubercular gland is slow and indolent, and if suppuration takes place at all it is only after weeks or months.

Tubercular meningitis is another form of the disease frequently found in children. It is not a primary affection but a terminal lesion produced by the germ being carried to the brain by the lymphatics or blood. In young infants it is usually secondary to general tuberculosis, while in older children it may be secondary to tuberculosis of the lymph nodes, bones or joints. Sometimes tubercular otitis is responsible for the starting of a meningeal affection. It is most frequently found between two and seven years of age, and is rarely if ever found in adult life. The pathological condition shows a secondary growth of miliary tubercles in the meninges. As tubercular meningitis is really but a symptom of general tuberculosis in the early stages of the disease, the symptoms are the same, there being a lessened appetite, loss in weight, anæmia, etc. This state may last many months but finally symptoms of cerebral irritation begin to appear. The child is irritable, easily frightened, cries out shrilly, especially at night; is dizzy, vomits without any apparent cause, and has a moderately elevated temperature. Drowsiness, which was not marked at first, becomes more noticeable. The urine is scanty and there is obstinate constipation. Abdominal pains are often present, and in certain cases the characteristic boat shaped abdomen is noticed; the child continually rolls its head. When the condition has gone on to exudation pressure symptoms appear. The child gradually sinks into a deep comatose condition, the respiration and pulse becoming slow and irregular and there are often present convulsive twitchings of the muscles. Continued convulsions may precede death for several hours. The pulse weakens and death comes from paralysis of the cardiac and respiratory centers. The disease generally lasts from three to six weeks, but it may continue for twelve weeks or shorten its course to one week. It may be mistaken for cerebro-spinal meningitis. In typical cases the differentiation is quite marked. The long prodromal period does not occur in the other affection, and the temperature in the latter disease is much higher. All the symptoms of cerebro-spinal meningitis are acute while those of the tubercular variety are subacute in character.

Tuberculosis of the joints is another form which is essentially a

disease of childhood. It is rarely present under one year of age, being generally found between the third and eighth year. Traumatism may be the cause of chronic disease of the joints, but the element of heredity is found in a large proportion of the cases. Chronic tubercular disease of the joints is also found following the exanthemata, especially measles and scarlet fever, but in these cases there has generally been some tubercular foci lying latent elsewhere in the body. Tuberculosis of the joints in children, as in adults, is now generally regarded as being of bony origin. The tubercular process extends from the bony structure to the joints where the tubercle bacilli set up an inflammation of the synovial membranes, later the soft parts become affected and abscesses frequently follow. Hip joint disease is a form which it often takes. In the early stages the joint is somewhat limited in motion and the pain is referred to the knee. There is some lameness and night cries. A wasting of the muscles of the thigh and calf is noticeable. The prognosis in the early stages for the restoration of a useful limb is good. But it must be remembered that tubercular meningitis may develop at any time. However, good results are obtained even in late cases by the proper application of traction.

Potts's disease of the spine generally begins with a stiffness of the back and pain on exertion, which is often referred to the abdomen or chest. Psoas abscess is a frequent complication in the lower part of the column. The chief diagnostic sign, though, is stiffness in some part of the spine. These cases often get well when the spine is properly supported although the prognosis is not as favorable as in hip joint disease. If the tubercular disease attacks the knee joint there is a chronic swelling of the joint generally accompanied by pain. The knee is slightly bent in walking and extension of the limb is difficult. The swelling is gelatinous in consistency and involves the joint. This affection may be mistaken for chronic sprains, but the latter condition is not frequently found in children, and as a general thing, the diagnosis offers little difficulty. The chronic tubercular diseases of the other joints are usually characterized by swelling and more or less stiffness and pain, and as a rule, symptoms similar to those just noted.

Tuberculosis of the intestines is a disease of middle childhood and but rarely found in infants. It is almost always secondary to tubercular lesions elsewhere, and is found in connection with tuberculosis of the mesenteric glands. The infection is undoubtedly

from the lung, by means of the sputum which has been swallowed. The tubercular lesions are found mostly in the lower end of the ileum, then in the rectum and then in the colon. The corresponding lymph nodes are always affected. The tubercular lesions are generally in the form of ulcerations, which begin both in the solitary follicles and in the Peyer's patches. They show a tendency to grow in the direction of the lymphatics, and may extend clear around the circumference of the intestines The symptoms of tubercular ileo-colitis are indefinite, the most common one being a persistent diarrhœa. Sometimes, however, large ulcers may be present and constipation exist. If the case is primary tuberculosis of the intestines the only positive means of diagnosing the disease is to discover the tubercle bacilli in the discharges which is very difficult to do. The differential diagnosis from chronic non-tubercular ileo-colitis is generally easily made, as in tubercular disease there will be found tubercular symptoms elsewhere, and the onset is more insidious than in the non-tubercular. The prognosis of tubercular ileo-colitis is unfavorable, but depends largely on the stage of the disease in other parts of the body.

Tubercular peritonitis is also a disease of middle childhood rarely found in infants. It is generally secondary to tuberculosis elsewhere, but in rare cases may be primary. Its initial symptoms are vague with a gradual development of ascites, later occasional abdominal pain, little tenderness and occasional vomiting. Paroxysmal attacks of diarrhœa or constipation may be present. The temperature, as a rule, is moderate with a slight afternoon rise. The general condition will, as in other forms of the disease, help in its diagnosis and its prognosis will depend largely on the tubercular lesions in other parts of the body.

There are other tubercular manifestations found in children which have not been mentioned in this paper, but the main ones have been briefly noted. It is to be hoped that with the additional light which is continually being thrown on this subject the time will not be far distant when we will be able to cope still more successfully with its varied forms than we have been able to do in the past.

MARASMUS.

ANNA JOHNSTON, M. D., PITTSBURG.

Marasmus is a term that is used somewhat indiscriminately. Other synonyms are: Infantile atrophy, athrepsia, wasting disease of childhood. It usually occurs during the first six months of childhood, but may develop much later.

Unless we can get the family history it is difficult at times to differentiate this disease from tuberculosis or syphilis, as often the cause is very obscure.

The pathology does not throw much light on it, atrophy being about the only condition found primarily, later secondary conditions frequently exist, such as fatty liver, fatty degeneration of the heart and kidneys, thrombosis in the kidneys, lungs and brain, broncho-pneumonia, bronchitis and intestinal catarrh.

The most important symptoms of this disease are gradual emaciation, skin dry, harsh and wrinkled, pulse rapid and feeble; there may be some fever, especially if there is a tubercular diathesis, but usually the temperature is normal or subnormal. Urine scanty, acrid; bowels may be normal or nearly so, occasionally diarrhœa and constipation in alternation, but this condition is oftener an earlier symptom than a later one.

As to the prognosis, if the case is not tubercular we have a fair chance of success, much better than our friends of the old school. One of their authors says, in speaking of the treatment of this disease, that it is purely dieting; another says the treatment is essentially by such modification of the milk as to promote intestinal absorption *and without drugs.*

When we contrast the treatment of our school we should be rejoiced to know that we do use drugs, thereby succeeding, where otherwise we might have failed.

While not losing sight of the dietetic and hygienic treatment, which are of prime importance, I again affirm that our cure also depends much upon the careful selection of the indicated remedy.

With this brief consideration of this subject I wish to report three cases of marasmus which I have treated, each of which had been under the care of the other school, and the last two had been given

up. They had done everything, even to the administering of that last remedy which is always held in reserve for extreme cases.

Case I.—James N., æt. nine (9) months, weighed seven (7) pounds. The atrophy was probably the result of tonsillitis followed by an abscess in the groin.

Child lay on his back, seemingly but semi-conscious; sleepless; pulse very weak and rapid; temperature slightly elevated; urine scanty; bowels moved frequently; stool very thin, greenish; anus and nates excoriated; eyelids inflamed; mouth ulcerated. No indication of teeth as yet. Night sweats, a little hacking cough; some crepitant rales were found in chest.

Arsenicum iodide was prescribed, later Chamomilla, and, finally, Calcarea phos. was used to finish the case.

As the hygienic surroundings were of the best, there remained nothing to be corrected along that line.

For nourishment we gave him cow's milk modified with Fairchild's Peptogenic Milk Powder. With each feeding five drops of Bovinine were given.

Olive oil inunctions morning and evening were administered.

In about four weeks I discharged the case. By this time he was able to sit alone, before he could not even hold up his head.

The family then went to the country for the summer, it being then about the middle of June. When they returned in September he had several teeth, and seemed quite healthy.

Case II.—Samuel C., æt. 14 months, greatly emaciated was carried around on a pillow; pulse so weak it was difficult to count; temperature subnormal.

Vomiting after each attempt to eat, yet appetite voracious. Abdomen very much distended; bowels moving almost constantly; stools, greenish, slimy and bloody. Merc. corr. corrected bowel trouble very quickly, but broncho-pneumonia set in about that time. It seemed for a few days that we would surely lose him, but Ferrum phos. followed by Tartar emetic cleared away that trouble, and the little fellow made a rapid recovery.

We gave him malted milk and Bovinine, also the olive oil inunctions. With all this trouble it took not quite four weeks to complete the case.

Case III.—Mary R., æt. five months. Had been ill for seven weeks during the last three of which had been receiving daily visits from their physician. He had tried all sorts of foods, broths

and gruels, but to no avail. At last he said all had been done, the baby could not live.

The family were in despair. Growing reckless they decided to try Homœopathy, not that they had any faith in it, but to satisfy a sister who had.

By this time the child was too weak to cry, but whined night and day. Never slept, was ravenously hungry, but whenever it was fed its bowels moved. Emaciation was very great, extremities cold, pulse very weak and rapid; in fact, it looked as if it were dying. Arsenicum was the remedy given. One hour after the first dose was administered circulation improved, hands and feet were warm.

The grandmother still maintains that that medicine worked a miracle. The only other remedy used was Chamomilla.

In this case I also used cow's milk modified with the peptogenic powder. In a very short time our baby was well. Needless to say its cure was the means of thoroughly converting that family to Homœopathy.

THE PHYSICIAN'S ROLE IN CHILD DEVELOPMENT.

I. D. METZGER, M. D., TYRONE.

The primary meaning of the term "doctor" is teacher. Coming from *docco*, I teach, it signifies one who enlightens humanity along certain lines. If he be a doctor of medicine, then along medical lines. As professional borders are more clearly drawn, the physician is apt to feel content to await his call to the sick room, administer his remedies, look for his fee, and forget that this is only half his mission, the other more important half being that of a preserver of health. To teach human beings how to keep well is much better than to make them well, and is also generally quite as difficult. The morbidly selfish physician whose countenance brightens at the advent of an epidemic to his community and disparages all efforts to stamp it out, lest he fail to reap some possible gain, is unworthy the profession and should be marked. The derision which attends the efforts of many boards of health goes to show how meagerly the people of these communities appreciate health and means of maintaining the same. The physician who is earnest, active, fearless and

discerning in matters of general hygiene is a blessing to any community, and ere long will come to be appreciated.

Nowhere does vigilance in precautionary measures count for so much as in child-life. The infant vegetates not unlike the plant. Envelop it with the proper influences and excellence in physique and mentality is inevitable. When we glance about us and observe the many physically imperfect beings grown tall, we cannot help feeling that there must have been some dreadful mistakes somewhere. Perhaps the parents are to blame, peradventure the teacher, surely the physicians of their day.

If he whose business it is to care for his patrons' health permits malfeasance to work harm before his eyes, how can we expect those who discern not the workings of injury to arrest the same, even though it be among their kin? Surely the physician's opportunities are great while his obligations and his responsibilities many.

To be a good physician means necessarily to be a good psychologist as well as pathologist and therapeutist. Soul-sickness is more dreadful than body-illness, and requires the application of entirely different therapy. The child's unstable nervous system is easily disturbed. This in turn may inhibit or accelerate its physical functions and quickly result in some pathological lesion. At no period of life is continuous ease of mind so much needed as in childhood. Then it is that the nervous system is organizing, association fibres are uniting the various centres, nerve impulses are seeking new courses through the delicate organism, which, when once established, are hard to obliterate. Thus are forming the inclinations and habits which predetermine subsequent actions. "As the twig is bent the tree is inclined."

The majority of activities during adult life are automatic functions which developed in youth. If they be desirable ones, it is fortunate for their possessor; if not, life becomes a constant struggle with himself in his efforts to undo what should have been avoided early in life. Many a woman or man can trace her or his invalidism to youthful indulgence which might have been prevented by more considerate parents or family physicians. Better build aright these physical and moral structures than to let them go by default and be compelled later to be constantly patching them up.

School, now opening, occasions its own peculiar maladies, the acute infectious diseases and especially the exanthems. These are accidental and can be prevented only by the most hygienic meas-

ures. But what shall we say of subjecting the child day after day for three-fourths of the child-life to the constant distress and anxiety occasioned by the vitiated air and the exasperating restrictions of the average school room? We should gladly welcome the dawning day in which educators are recognizing the fact that normal mental and physical evolution are produced by the unconscious play-like efforts of the child in which the mentality unfolds as the budding flower, eager to catch the rays of intellectual light. Drudgery dulls the mind and dwarfs the body. Educational processes, properly performed, awaken the sleeping soul and innerve the nascent body. Our plea for the child should be:

(*a*) Shorter hours of mental application

(*b*) Longer hours for physical recreation.

(*c*) Methods of culture which are as simple as possible and yet will furnish a broad intellectual basis.

(*d*) The greatest possible physical freedom during study hours in school with the smallest possible amount of home study, and

(*e*) A minimum amount of anxiety at all times.

Sitting erect, folded arms, feet suspended from elevated seats, lips silent, and a motionless body, all so abnormal to a healthy child, may exhibit the master's might but are not conducive to either mental or physical development. Such restrictions produce either a stupid child or a refractory one; the former results in indolence, and the latter in crime. Herbert, the great German teacher, said; "Stupid people cannot be virtuous." He might have added, "Neither can they be health-loving, health-giving nor health-possessing." They are of no service in the world, and they take up a lot of valuable room.

You may say, "Why should we concern ourselves about these school matters?" This is evidently what physicians have been thinking these many years; satisfied to treat the results of misdoings rather than attempt to correct their cause. Modern physicians are fortunately anticipating diseases to prevent them rather than be content to follow them through their clinical courses when present.

The doctor who fears to assert himself on questions involving public health is apt to be like the man who tries to carry water on both shoulders, in imminent danger of an overwhelming deluge.

The modern soda fountain is a curse to the community. It will not only cause gastro-enteric and other associated troubles, but it develops the drinking habit, causes in youth cravings for stronger

beverages later in life. Thus, unwittingly, the parent encourages in his child tendencies the outcome of which would make him shudder. Indulgences are permitted, disorders follow, and the doctor is eagerly sought to correct them. Better to teach the child how to obey nature's laws than to try to shield him from the inevitable punishment which she metes out upon their transgression.

Instruction in hygiene and physiology is more worthy the modern physician than an expert application of therapeutics. The bad humors of the ancients, originating within the body and causing the majority of illnesses, are found in modern times to be foreign immigrants invading the body at every opportunity and are capable of being prevented by a rigid enforcement of hygienic laws. The abortion of disease, which in many cases sounds so mythical, may be but an overwhelming skirmish of our therapeutic measures over microbic invasion, which have not yet secured a substantial foothold. Better to fight these obscure, yet real, enemies in their primal habitat, when possible, than to eradicate them from the human system after much damage has been done. Prevention is always better than relief, but, unfortunately in our profession, is ofttimes less profitable.

Many parents and even some physicians seem to welcome to their juvenile patients the so-called innocent one term acute infectious diseases. By hoping to secure permanent immunity against whooping-cough, measles, chicken-pox, mumps, etc., their innocents are subjected to such permanent handicaps as phthisis, otitis with deafness, ophthalmia, nephritis and all kinds of nervous affections. Judicious prevention will spare many children from these attacks and may eventually stamp the diseases out of existence.

Too many reaching adult life must now exclaim with a former editor of the London *Quarterly Review* as possessing—

> "One eye not over good,
> Two sides that to their cost have stood,
> A ten years' hectic cough
> Aches, stitches, all the various ills
> That swell the devilish doctor's bills,
> And sweep poor mortals off."

A vital hindrance to the intelligent prosecution of the physcian's work among children exists in the customs, superstitions and "advice" of solicitous "grannies." Here "a little knowledge is a dangerous thing." Their varied experiences may have given them op-

portunities for picking up scraps of medical knowledge which they eagerly foster, elaborate and apply or misapply on every possible occasion. Partial knowledge along professional lines is generally unsafe. Especially is this true in medicine and law, for you know it is the skilled physician and lawyer who escape the clutches of disease and the law, respectively. The former can keep himself clear from many diseases, and the latter, when involved, can clear himself from litigation.

The majority of young parents, after having learned the basic principles of physiology, hygiene and anatomy as taught in our public schools, have much more reliable ideas along medical lines than all the grandmothers of the community. They need to be encouraged to seek practical knowledge from their physicians rather than harken to the "wisdom of soothsayers."

The great ratio of infant mortality is alarming. If, by wiser methods of feeding and more judicious therapy, more of these little ones could be saved, there might be no cause for alarm concerning racial suicide.

The strenuousness of modern times involves child-life as well as adult life. Habits of haste sap the vitality from the child, making him a weakling ere he reaches the period of usefulness. Rapid eating with its consequent imperfect mastication and altered digestion may become a habit which is more vicious and harder to break up than inebriety. Constipation with its many sequences, Bright's disease, diabetes, rheumatism in its various forms, brain softening, and even insanity may eventually result from this habit. Most all inmates in asylums are regular hog eaters, swallowing large, indigestible lumps without adequate chewing and resulting in all kinds of gastro-intestinal troubles.

Omniverous reading habits, long days of activity and short nights of rest in the child all tend to augment the neurotic tenor of American life. Mind should be taught to overpower inclination, and thought to supersede habit, so that the youth is led to know what to do and then is impelled to do as he knows. Thus, by vigilant circumspection, by diligent care and by judicious and persistent guidance, the conscientious physician may save the developing child from many pitfals and handicaps, and bring him to maturity a being as nearly as possible equal to the world's highest ideal, a perfect man.

DISCUSSION.

DR. Z. T. MILLER: What the doctor says about the public schools is absolutely true. I think he might have gone further, and said that the time will come when we will have our vacations in the cold season of the year and teach our young in summer time, but we will not teach them in school houses. We will take them out in the open where they can breathe a little fresh air, and will not keep them shut up in school houses in the winter time, with the windows all down, or if we do have them open we have a draft on the children.

What the doctor says about psychology is also true. I think I have seen two children that had wry neck, lasting for many months, that were kept stiff-necked by their mother. The mother always told those children they had stiff neck, and they consequently had it. I have noticed those children when they were not being watched by their parents, and they would never show any signs of stiffness of the neck, but the moment the mother began to tell me how bad the children were the necks went back. This is the result of suggestion, I think, and the children took it in. What could I do with a woman of that kind? They are a fruitful source of revenue. If I had told that woman she was making her children sick, the chances are I would have been dismissed. I hope the doctor will become a member of a school board and will inject some good sense into their proceedings.

ABDOMINAL DIAGNOSIS IN CHILDREN.

C. SIGMUND RAUE, M. D., PHILADELPHIA.

The field covered by abdominal diagnosis is so vast that in a paper of this kind it is impossible to do more than simply point out the importance of careful routine method and attention to detail in the examination of the abdomen. In addition there are a few practical lessons that have impressed themselves upon me in my experience among sick children, and to these I wish to call special attention.

Let us first consider the subject in a general way, and review the methods that must be employed at the bedside in order to determine the nature of an abdominal condition.

The family history is first ascertained, for we know that tuber-

culosis plays an important role in the etiology of abdominal disease in childhood, while in infancy syphilis must be taken into consideration. We must also determine whether the disease be acute or chronic, and the mode of onset, whether gradual or sudden. The sequence of the symptoms is also of the greatest importance. This is well illustrated in appendicitis. The symptoms in this disease occur in the following order: (1) Pain in the abdomen sudden and severe; (2) nausea or vomiting after a few hours; (3) general abdominal sensitiveness, most marked over the appendix; (4) elevation of temperature, following shortly after the onset of pain. When this order varies Murphy always questions the diagnosis, his opinion being based upon an analysis of 2000 cases. (*American Journal of the Medical Sciences*, Aug., 1904.) In children the fever may be of little consequence in the beginning of the disease.

The condition of the bowels must be inquired into. In inflammation of the gut there is diarrhœa; in acute peritonitis and appendicitis the bowels are constipated, while in intussusception they are at first loose, later becoming obstructed, or bloody mucus oozes from the rectum.

The presence or absence of fever and pain must be determined. As to the latter, it will show itself as general sensitiveness in acute peritonitis; localized pain in appendicitis; griping pain in the umbilical region in colic and sometimes in worms; epigastric pain in vertebral caries in the dorsal region; referred pain in the right iliac fossa in pleuropneumonia at the right base, etc. One of the most severe and obscure forms of abdominal pains encountered in children is that observed in Henoch's purpura.

The state of the nutrition prior to the development of the affection, the appearance and color of the stools and the condition of the urine must all be inquired into.

While we are getting this history the child is being undressed and we are now ready to proceed with *inspection*.

The entire child must be taken into consideration, as the state of the nutrition, the color of the skin and the facial expression will often present pathognomonic signs. The cachexia of malignant disease and the toxæmic, jaundiced appearance of cirrhosis of the liver so common in adults are rarely encountered in children, but, on the other hand, the emaciation and bright expression of tuberculosis and the exhausted, wasted appearance of marasmus are very common.

The abdomen may be normal in appearance or it may be enlarged, sunken or retracted. The last named condition hints at meningitis. In emaciated subjects it is usually soft and sunken, the intestinal coils being plainly visible. In marasmus and rickets it is distended and tympanitic. A large tumor, such as sarcoma of the kidney, causes an irregular enlargement of the abdomen. In tuberculosis peritonitis, when the fluid and adhesions are present, the abdomen is almost uniformly enlarged, but ridges are seen at different points corresponding to the site of the adhesions. In ascites there is pronounced enlargement, but the flnaks are bulging when the patient lies upon the back. Uniform distention in children is usually due to gas. A common cause for prominence of the abdomen in childhood is enlargement of the liver and spleen. Both organs are frequently enlarged at the same time.

Intestinal obstruction produces marked distention of the abdomen, especially in the chronic form when the obstruction is low down. A common site for the obstruction is the ileo-cæcal region. Under these conditions peristaltic waves originating in the hypertrophied and dilated gut above the obstruction are generally visible. In pyloric obstruction the stomach becomes prominent and also shows peristaltic waves. In dilatation of the stomach the lower border has a convex outline, while in dilatation of the colon the curve is concave.

During childhood the bladder extends well up into the abdominal cavity, and when it is distended with urine it becomes plainly visible.

Pulsations may also be visible. Aneurism is practically unknown in children, but a pulsating liver may be found in association with grave heart disease.

We should also look for enlarged veins, the presence of which would indicate intra-abdominal circulatory obstruction. The collateral circulation that is established in this condition results in the dilatation of certain veins depending upon the seat of the obstruction. Thus, in obstruction of the portal vein through cirrhosis of the liver or thrombosis, dilatation of the mesenteric veins and the group of cutaneous veins communicating with the umbilical vein is produced. As a result of this distended veins appear about the umbilicus and in the epigastric region (caput medusæ). In thrombosis of the inferior vena cava, large tortuous veins run up from the groin and communicate with the internal mammary veins.

Percussion will, as a rule, do no more than confirm what we are able to determine even more satisfactorily by palpation, but there are a few points deserving of mention. The shifting dulness in the flanks due to fluid is a beautiful demonstration of the value of percussion in abdominal diagnosis. It is also particularly valuable in the diagnosis of growths springing from the kidneys or in the case of any tumor of retroperitoneal origin. Here we will have the gut, and consequently a tympanitic note, directly over the tumor. When the left kidney becomes enlarged it may be difficult to distinguish between it and the spleen. In the case of the kidney, however, the descending colon will pass directly over the tumor, giving a tympanitic note at this point. In case of doubt the large intestine may be inflated, when the colon may be demonstrated in front of the tumor both by inspection and percussion. (Sahli, *Klinische Untersuchungs-Methoden.*)

Auscultation is at times available. The absence of all gurgling sounds in acute septic peritonitis and the exaggerated gurgling heard in intussusception are signs to be noted.

Palpation naturally gives us the most important data as to the contents of the abdomen, and I shall confine my remarks to a few points of everyday interest rather than plunge into the realm of the rare and the obscure.

In the first place, we must decide whether a tumor is intra-peritoneal or retro-peritoneal. In the former instance the tumor is either freely movable or at least moves with respiration. A retro-peritoneal growth is stationary; furthermore, the gut lies in front of it and gives us a tympanitic note. (Albert, *Surgical Diagnosis*) In the case of the kidneys, however, which are normally retro-peritoneal organs, a freely movable tumor may be formed by their breaking away from their attachments. Floating kidney occurs in childhood, and a number of cases have been reported. Jacobi and Koplik look upon the condition as one of congenital defect, but I have been able to palpate the kidney in a number of rachitic children with flaccid abdomens.

Hydronephrosis produces a large, elastic tumor, often freely movable, and the condition may disappear after circumcision. A cystic urachial remnant may be of sufficient size to become palpable.

One of our prominent clinicians once expressed surprise when I told him that impacted fæces was a common condition in children. I always look for it as a routine step, especially during convalescence

from typhoid fever or pneumonia, and invariably when there are rectal symptoms or pain in the back and lower abdomen. I once removed half a small chamber full of fæcal matter from a child after having anæsthetized him in order to make a thorough rectal examination. The bowels had been moving daily, but there was intense backache, and I had suspected a pelvic abscess. The rectal examination has been facetiously alluded to by Dr. Osler as "the consultant's chief duty," but there is no reason why you cannot make it yourselves.

When free fluid is present in any considerable amount in the abdomen it is impossible to examine the abdominal contents without first tapping. After this palpation is most satisfactorily performed, and we can also gain much additional knowledge from a chemical and microscopical examination of the fluid.

Malignant disease is fortunately rare in childhood, sarcoma being found more often than carcinoma. The kidney is the organ most frequently involved.

Retro-peritoneal tumors are usually tuberculous abscesses. Appendicitis is rare before the fouth year. Its symptoms may be closely stimulated by pneumonia affecting the right base, for which reason we should never be too hasty in diagnosing appendicitis in children.

In conclusion, let me say that when the spleen and liver are enlarged we should always examine the blood. A frank case of rickets may produce this condition, but we cannot be certain that we are not confronted by a graver disease until the leucocytes have been studied.

DISCUSSION.

Dr. J. E. Belville: A comprehensive paper of the character presented would naturally suggest to many of us a number of points that ought to be emphasized. I would like to emphasize one in regard to appendicitis in children. We used to consider temperature a guide in appendicitis. I believe everybody now has given that up. My own observation of appendicitis in children is that an elevated temperature generally means the condition has gone on until septic peritonitis has been developed, or is beginning to be developed. The tenderness is absolutely the only sign, and the difficulty of accurately locating it in a child requires particular care

in its examination. Distract the child's attention so as to evince signs of tenderness by changes in the child's expression. You can accurately locate it, even in very young children, in this way. That is the only sign upon which you can depend. I call to mind a recent case in a child in which all the symptoms were so very slight it seemed almost folly to think the child was a subject for operation. He developed the regular chain of symptoms, beginning with pain, vomiting, the pain being slight; all the child complained of was the stomach, the tenderness being slight but definitely localized, the temperature perfectly normal until the child was on the way to the hospital. When he was opened we found septic peritonitis developing already, showing that to be the cause of the elevated temperature.

A second point I want to emphasize is in regard to fæcal impaction. We used to have them bring children to the dispensary when I had charge of the rectal department, complaining of incontinence of fæces. The minute we looked at the child we saw that the rectum was absolutely paralyzed. On examining one case we found a mass larger than a cricket ball. So it is absolutely necessary always to examine the rectum in these cases, even where they complain of diarrhœa, because when you find the rectum paralyzed you may be sure you have a full rectum.

REPORT OF THE

SECTION OF SURGERY.

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SURGERY OF THE HEAD: THREE CASES.

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The three cases that I have picked out for presentation to this Society represent some of the work done during the year that has passed. One is an example of the frequent accidents handled so commonly in a city hospital, namely, fracture of the skull, and the others are each types of diseased conditions calling for special surgical treatment.

Case 1. B. L., four years old, was seen on April 12th in consultation with Dr. Bernstein. The following history was elicited:

Yesterday afternoon she fell headlong from the second story window to the ground, a distance of about fifteen feet. She was rendered unconscious for a short time, then appeared to be all right. Dr. Bernstein was sent for and found the child slightly shocked, drowsy and complaining of pain in the head. There was a large bruise on the forehead. There had been some bleeding from the nose, but it had ceased. I saw the patient twenty- hours after the accident. Examination showed a bruise of the forehead, the scalp was boggy and pitted on pressure, there was ecchymosis of both lids of both eyes, the left being so enormously swollen as to preclude its separation in an effort to examine the pupil. The right pupil was contracted and even reacted to light sluggishly. There was marked subconjunctival hæmorrhage. The child was very

drowsy but could be aroused, when she displayed irritability and fear as of something going to injure her. There were no paralyses and no convulsive attacks.

The patient was removed to the West Philadelphia Homœopathic Hospital and operation undertaken. A straight incision was made in the median line of the forehead, most of it being within the hair border, and lying exactly over the bruise. On exposing the skull a longitudinal fracture was found extending forwards to the glabella and backwards to the site of the anterior fontanella. This corresponds to the location of the frontal suture, which in a child of this age would probably be still unossified. The injury was then not a true fracture but a separation of the frontal suture. There was a slight depression of one-half of the frontal bone.

A trephine opening was made to the right of the fracture and a large blood clot pressing on the brain was found and removed. In washing away the last of the clot there was a tremendous hæmorrhage of venous blood. A firm pack of iodoform gauze controlled the bleeding, which was coming from a long tear in the superior longitudinal sinus. The displaced bone was elevated and replaced and the wound was left open.

Convalescence was uneventful, except that the partial stupor and irritability were slow in clearing up. One week later the pack was removed under an anæsthetic and the wound sutured. There was no further bleeding. Complete recovery followed. I received a letter from her father in August saying she had been perfectly well with the exception of an attack of measles and summer diarrhœa, from which she had a good recovery. An interesting point in the case is that the child was subject to petit mal before the accident, but since the latter there has been no recurrence of the attacks.

This case illustrates two points in cerebral injuries: First, the tolerance of the anterior lobes to pressure, for while the operation revealed tremendous compression of the brain from the extensive blood clot, yet the symptoms of pressure were but mild. The same amount of compression in the temporal region, judging from former experiences, would have produced profound coma, slow pulse and stertorous respiration. Yet all these symptoms were absent in this case, slight stupor alone being present, which, however, was increasing, a sign indivative of hæmorrhage.

The second point that I want to bring out is the symptom of fear or anger. This has been ably explained by Dr. Tuller as a symptom

of great value in connection with lesions of the frontal lobes on the left side. In this case this symptom was very noticeable, and, further, led me to believe that there was irritation or compression of the brain from an extra-dural clot.

Another symptom that I want to bring out, although it is a well known one, is ecchymosis of the lids. This together with subconjunctival hæmorrhage will point to fracture of the orbital plate of the frontal bone, but it must be borne in mind that a fracture of the malar or superior maxillary bones will cause it. Also a fracture of the middle fossa will produce the same symptom, owing to the blood working its way forward through the sphenoidal fissure and the optic foramen. Escape of cerebro-spinal fluid or hæmorrhage from the nose indicates fracture of the cribriform plate of the ethmoid, and calls for careful disinfection of the nasal cavities to prevent infection of the meninges.

Case 2. J. B. O., 24 years old, was sent to me by Dr. J. J. Tuller, giving the following history: Contracted a severe cold and earache in December, 1903. It was followed by a discharge from the left ear, which has kept up more or less ever since. There was no further trouble, however, till the 7th of June, 1905, when he was taken with dizziness and fell backward. He did not lose consciousness. At the time he was at work firing a locomotive There was a sense of fulness in the ear and back part of the head and drowsiness and mental torpor for the rest of the day so that he had to lie down. Another similar attack occurred on the 24th, which was also followed by dizziness lasting several hours and inability to "walk straight." Since the first seizure he has complained of pain in the head and a sensation of fulness in the occipital region.

Examination of the ear showed the external auditory canal filled with a foul smelling, yellow pus, and a perforation of the membrana tympani was made out in the lower anterior portion. There were in addition tenderness over the mastoid and down the neck along the sterno-mastoid muscle. In view of the symptoms, it was decided that we had to deal with a case of pachymeningitis, if not of brain abscess, secondary to mastoid disease, or middle ear necrosis. Because of the pain in the occipital region the inflammation was thought to be in the posterior cranial fossa. On July 1st operation was undertaktn.

The ear was irrigated and the membrana tympani was freely incised, then the mastoid antrum was opened after the method of

Schwartze. The bone proved very thick, and the antrum deeply situated, and larger than the average. No pus was found, however, only granulation tissue, and exposure of the mastoid cells showed them to be normal. Careful examination of the tegmen tympani did not show any necrotic areas, nor was the inner wall of the tympanic cavity diseased. The tympanic cavity was cleaned out and the mastoid drained. Following the operation there was some pain and elevation of temperature and quite a free discharge of muco-purulent fluid from the antrum. The headache and dizziness were relived at once and the convalescence was uneventful. Slight discharge of pus continued from the ear after the mastoid incision healed, for which the patient received appropriate treatment.

Since the operation the patient has had a recurrence of the dizziness on two occasions, although to a less degree than before. At the present time he is doing a day's work and has no symptoms other than a slight discharge from the ear.

This case is still hanging fire, and I doubt if he has seen the end of his trouble. Bergman states that a localized pachymeningitis and even a brain abscess can become latent, and in the case of abscess the latent period may be two years. Whether this has occurred in this case, or whether the opening and drainage of the mastoid antrum and the tympanic cavity has controlled the suppurative process, it is impossible to say.

Brain abscess secondary to middlle ear disease is usually located in the temporo-sphenoidal lobe, and next in frequency in the cerebellum. In the former instance the infection takes place after necrosis and perforation of the tegmen tympani, and cerebellar abcess is due to infection from perforation of the inner wall of the antrum, or following sinus thrombosis. Infection may occur also without fistulæ of the bone; it then travels along certain venous channels, or, rarely, along prolongations of the dura. The course of a pachymeningitis is toward a leptomeningitis and brain abscess.

Within the last year I have had an opportunity to witness the fatal results of just such a case as this one may have been, once they start to "go bad." Two cases were admitted to the Hahnemann Hospital of Philadelphia. One occurring in the service of Dr. C. M. Thomas, the other in that of Dr. H. L. Northrop. Both cases gave a history of long-continued discharge from the ear, with no other symptoms, and for which they had received treatment off and on. They were both admitted to the hospital in an uncon-

scious condition. In each instance the abscess was located in the temporal lobe, and was evacuated and drained after the radical operation had first been done. Both cases died without regaining consciousness. The best treatment of brain abscess at our command is to prevent its occurrence, and for that reason I would enter a plea for more energetic surgical interference in that class of cases of chronically suppurating ears that have received a thorough course of appropriate treatment and have not been cured.

Case 3. H. W. B., male, 45 years of age; a carpenter; was admitted to the West Philadelphia Hospital by his physician, Dr. H. M. Gay, on May 31st, giving the following history:

Was perfectly well until three years ago last March. At that time while working on a building he was hit on the head by a falling brick and rendered unconscious. He was removed to a hospital where his injury was found to be a simple scalp wound, and he was discharged within forty-eight hours in good condition. He continued in his usual good health for a year, when his wife first noticed that he was becoming forgetful, and kept losing his carpenter tools. This condition grew rapidly worse, and at the same time he became very drowsy, sleeping away most of the day. He also lost in weight, became stooped, and aged rapidly. There was no headache or pain at the site of the injury at any time. He gradually lost all track of things, and as his wife expressed it became a child again. Since the first of the year he has complained of numbness in the left hand; the fingers would become stiff, and he could not flex them. This condition would come on about three times a week.

Within the last eight months he has had two attacks that were styled "spasms" by his family. He became very much excited, struggling and attempting to get away from something that appeared to terrorize him. These attacks lasted for twenty minutes or more and were followed by a deep sleep. He did not lose consciousness. An interesting feature of the case was the condition of the blood vessels. Although the man was only 45 years of age his arteries were atheromatous to the degree one would expect to find in a man of 65 or 70.

The neurological examination made by Dr. J. J. Tuller pointed to cerebral irritation from an adhesion, and an operation was decided upon as the only chance left for a cure. A flap was turned up from the skull, including the site of the old scar, and a button of

bone removed. There were no signs of any old fracture. The opening in the skull was enlarged with rongeur forceps and the dura thoroughly exposed. The opening corresponded to a point just above the right Stephanion and included parts of the frontal and parietal bones. The dura was found thickened, but there were no adhesions to the skull. A flap of the dura was raised and an adhesion was found between it and the pia. The latter was very much altered, presenting a marked œdema and thickening with distention of its vessels, and on pressure there exuded a free flow of serum. The underlying brain tissue appeared altered. The lesion was about the size of a half dollar and was entirely exposed. It was located over the lower portion of the upper third of the second frontal convolution. The dural flap was partly sutured, and a drain of iodoform gauze inserted between it and the pia after the adhesion had been thoroughly broken up. The scalp was sutured. With the exception of some brain irritation lasting two or three days the patient's condition was satisfactory for the first week. For three days following the operation there was free drainage of serum from the wound; this then gradually ceased, and the iodoform drain was withdrawn at the end of a week, and the wound allowed to close. On the day following the removal of the drain the patient had a seizure similar to his other attacks, only more severe, requiring restraint with straps and the administration of morphia. This lasted three-quarters of an hour. Two days later there was a second attack, but much milder.

From this time on improvement was slow but steady, the patient realizing the change in his condition, expressing himself as thankful that he had consented to the operation, and declaring that it was going to cure him. The change in the man was really remarkable; the numbness of the hand ceased entirely, and he appeared much brighter mentally. After a two months' stay in the hospital he was sent home with the wound completely healed and no evidences of hernia cerebri, which we had feared may take place through the drainage opening left in the dura. At the present time his condition is as follows:

The trephine opening is very noticeable, a well-marked depression marking it out. There is pulsation, but no pain or headache, and pressure is not painful. He has not been able to do any work, being too forgetful. He has not gained in weight, although he has a good appetite and goes about freely. There is some

drowsiness, though much less than formerly. He has had a few attacks of numbness of the left hand. A few weeks ago after imbibing a few steins of beer on a hot day he had two seizures of excitement and inco-ordinate motion similar to those before the operation. On the whole there is some improvement, but it is slight, and it is doubtful if he ever will be well enough to resume his work and take care of his family.

DISCUSSION.

Dr. D. P. Maddux: Concerning cerebral adhesions I have had under my care for several years a patient who I rather think has made the record of operations for that difficulty. Some five years ago I placed him under the care of a neurologist. A tumor of the brain was diagnosed. The man had certain definite symptoms, numbness of the left leg, lack of power in the left hand, a very marked and continuous headache, and decided impairment in his intellectual faculties, in the sense that a very moderate use of the mind fatigued and exhausted him. The operation was of the conventional type, exploratory. No adhesions were found and no tumor was found. Following the operation the man improved very decidedly. Pain in the leg and in the arm disappeared, and the use of those members improved. The headache left, but in a very short time the symptoms became worse again. Six months later the man's brain was again opened. This time dural adhesions were broken up. To shorten the story that man has had seven operations, involving exploration of the brain. Four times have I broken up what practically seemed the homogeneous tissue between the scalp and dura and pia each time followed by very marked improvement of all his symptoms, and in a few months a relapse of them. Some years ago I put an aluminum plate between the scalp and the dura, which he wore for a period of six months. During that period he seemed to have greater freedom from aggravated symptoms than at any other time. In the last operation, about eight months ago, I removed the plate, broke up some of the subdural adhesions, and attempted to reintroduce the plate. I, of course, had no difficulty in its reintroduction, but it seemed to act the second time decidedly like a foreign body. While there was no suppuration and no infection yet it irritated, and about two weeks ago I was compelled to remove it, but it is interesting in showing the toleration of the

brain to repeated operations, and it is interesting in showing the fact that after each procedure such marked relief was afforded the patient.

Dr. H. L. Northrop: The citation of these cases is very interesting and instructive, and shows the possibilities of surgical work on the brain within the skull, and I wish to mention a case along this same line. This last May a gentleman in Tamaqua came in contact with a bull. The bull tossed him and he fell, striking his head on the ground. Twenty-five minutes after that accident he became speechless and suffered right-sided hemiplegia. The hemiplegia disappeared by degrees, but aphasia remained. He was sent to Philadelphia and admitted to a ward of the Hahnemann Hospital. Dr. Tuller saw him, examined him, advised an exploratory operation, and it fell to my lot to conduct it. We opened the skull on the left side over the inferior frontal convolution, at what is known as Broca's speech centre. There we found evidence of recent hæmorrhage and inflammatory adhesions. We removed all of the diseased structure that we could, closed the wound, and the man made a good post-operative recovery and began to improve in speech. He was a Dutchman, and the first word he said was "Yaw," and he said "yaw" for almost everything. Then he had one or two other words to say. His vocabulary, however, was not at all extensive, but his wound had healed very nicely. It was thought best, as hot weather was aproaching, to send him home, and we hope, of course, that he has improved still further as far as speech is concerned.

Dr. C. P. Seip: I wish to call attention to one little case that occurred showing the remarkable interference that the brain will sometimes sustain and still recover from the shock. This man was about 23 years old, working on a building, and a sash weight, weighing twenty-four pounds, fell from the third to the second floor, broke in two on the joist and one piece, half of that, came down and struck him fair on top of the head. I happened to be in the hospital when he was brought in, and there was a very nice eggshell fracture of the cranium on the left side, and I had about one hour's work in getting out the spicula of bone. I put my finger down an inch and three-quarters into the brain and thought I had removed everything. The man recovered from the anæsthetic the next day, was rather stupid and drowsy for a few days, and after that gradually recovered his full consciousness. After

being in the hospital about two months this wound did not heal as nicely as I would have liked to have it. I opened up the scalp again thoroughly, examined the tissues and could find nothing that would give me any light on the cause of continuance of discharge. The wound was closed and healed nicely after the second operation. He was paralyzed in the left arm and left leg, but recovered sufficiently to go about very well with a cane. About two months after he had been out of the hospital he came back. I do not know who my successor was that term. Suppuration had developed, and we had to open up the wound again, and right on the surface, where it had been all the time that we had operated and worked with him before; I do not know, but right near the surface lay a little piece of old hat about three-quarters of an inch in diameter, which we removed. It had been driven in there, and was not found until the third operation. That man now is walking about.

Another man came in about the same time with apparently no serious injury to the brain. He died the next day. The post-mortem showed no clot nor anything in the brain. At the same time another man was brought in who was on a steamboat when the boiler blew up. He was on the lower deck and was thrown through the top deck out on top of the boat, on the other side of the boat. This is his story, and I believe it is true. That man had the whole left parietal bone removed from his cranium, and he was somewhat paralyzed, and I used to see those two men going out. They walked out together. They were together a great deal and became very chummy in the hospital. They would pass my house and go to an electrician whom they had been advised to see. Those men would walk past my house about twice a week, look at my house and walk off again. I do not know what they meant by it; but both cases were remarkable injuries, and the prognosis in each case at the time he came in was considered very unfavorable. However, they made good recoveries.

I believe we have in the Homœopathic Hospital in Pittsburg about as many head and spinal injuries as any hospital in the western end of the State, and all the laminectomies that I have ever known to be performed never succeeded in one case in restoring the functions of paralyzed parts of the body.

Dr. H Bierman: There are very few papers read before our Society that do not awaken responses in the memory and bring before us cases similar to those cited. I simply wish to call attention

to the fact that at times an "unfortunate" accident is fortunate for the victim. About ten years ago a little fellow, twelve or thirteen years old, tickled the hind end of a mule, with the result that there was a complete fracture of the parietal portion of the skull. Under a most unfortunate condition of affairs surgically and septically, I tried to cleanse the wound, and removed a portion of the brain tissue, with the result that the boy made an uneventful recovery. This young man, previous to this accident, was considered mentally unbalanced. After the accident people about him made the remark that he was much brighter than he had been before. I do not know that I would recommend such treatment for imbeciles, but I wish to call attention to that fact.

Dr. M. B. Gerberich: The subject of the amount of pressure that may sometimes be sustained and may be endured and yet not prove fatal or have bad results on the brain has been brought before us. I was called to assist in a case in which a child about ten years old had been leading a horse from one farm to another, and he was kicked by the horse in the head. The skull was fractured; there was a depression about the size of a half dollar. The depression was so great that the outer plate was deeper in than the inner plate of the skull. It was about an inch and a half above the ear and a little posterior. This was in the winter. When the horse came home the parent went to see about the boy. That was the first he knew about it. When he came across the hill the boy was walking towards home. He went to where it happened and saw blood on the snow, which indicated the boy had been kicked; was lying there a very short time, picked himself up and started to walk home. The father asked the boy about it. He told him what happened. He walked home about an eighth of a mile. He was conscious. They sent about three miles for a doctor. When the doctor came he found the depression, saw that he needed some assistance, and I was called in which took about an hour and a half to two hours more. In all this time he was perfectly conscious. He was talking with the doctor. The scalp was cut through. The two plates of the skull were depressed. The depression was circular, about the size of a half dollar, and so deep that you could put a knife blade between the upper portion of the outer plate and the lower plate of the skull. We removed that part. There was very little hæmorrhage, and the boy made a good and uneventful recovery. It shows the amount of pressure that sometimes may be brought

upon the brain without any serious results. Oftentimes a slight blow proves fatal.

Dr. G. A. Van Lennep: I only want to call further attention to one point, that is, the future that is before us in regard to surgery of those unfortunate cases of brain injury where adhesion has taken place, resulting in very undesirable and often degenerative mental symptoms. The main trouble has been, I believe, in treating these cases of cerebral adhesions following injury, that while we were able to break up the adhesion at the time of the operation and an immediate good result was obtained, yet some few weeks or months later the symptoms recurred, and if operation is undertaken again it is found that adhesion has taken once more. To prevent that we have attempted the use of some substance placed between the raw surfaces that are left after separation of adhesions with a view of preventing their gluing themselves together again, and we have tried silver foil and gold foil, and cargile membrane, plain and chromatized, and my present opinion is that there is yet to be found a satisfactory substance for this very important purpose of this class of cases.

DISEASES OF THE GENITO-URINARY ORGANS WHICH MAY DEMAND OPERATION THROUGH THE PERINEUM.

LEON T. ASHCRAFT, A. M., M. D., PHILADELPHIA.

Having done quite a number of perineal operations for various diseases of the male genito-urinary organs I have decided to enumerate them, together with my reasons for operating.

In plastic work, in the anterior urethra, such as operations for epispadias or hypospadias, or the excision of a stricture, perineal cystotomy is indicated as a preliminary measure, since it diverts the urine from its normal channel, thus preventing sloughing of the sutures. It is also employed where traumatism produces a rupture of the membranous urethra, as well as in structures about the bulbo membranous junction, which are not amenable to dilatation. It is likewise imperative in urine infiltration and extravasation. It is distinctly indicated in chronic posterior urethritis of gonococcic

origin, where, despite our best directed efforts, subacute outbreaks occur. In relapsing epididymitis it is curative, since it drains the prostatic urethra of the accumulated products of the ejaculatory ducts; in a similar way it markedly benefits seminal vesiculitis. I believe it to be the ideal route for evacuating either a prostatic abscess or the foci of chronic suppuration in that organ.

Five years ago (some time before Chetwood invented his operation) I pointed out the value of perineal cystotomy as a preliminary to the Bottini operation for hypertrophy of the prostate,* and have since practiced it with very satisfactory results: as the chosen route for prostatectomy it bears the weighty endorsement of Proust, Zuckerkandel, Guyon, Cathelin and others quite prominently identified with this work, as well as most of the genito-urinary surgeons of this country. While it is not my unvarying custom to thus operate, yet I have removed quite large tumors by this route. As a means of curing many diseases to which the bladder is subjected, its value is undeniable. Contracture of its neck may thus be corrected, and, too, calculi may thus be removed. It also affords a means for curetting ulcerated areas. I have already mentioned its value in chronic non-obstructive cystitis; here it is serviceable because it drains perfectly obedient to the law of gravity. Especially it is indicated in chronic irritability of the vesical sphincters, a cure resulting by forcibly stretching these muscles thereby temporarily paralyzing them and putting them at rest. The operation should always be employed for bladder exploration where cystoscopy is impossible. Particularly and emphatically do I value perineal cystoscopy for palliating urinary symptoms in old and enfeebled men, who are slowly dying from the results of a severe and prolonged cystitis. Many such cannot stand a prostatectomy or a lithotomy, or even continue to use the catheter, but they do rally from this operation when quickly made, with a consequent temporary lull in their distressing symptoms. Under such circumstances it becomes a necessity.

Having discussed those conditions which demand surgical interference, it may not be amiss to refer briefly to some technical points, since such may be either simple or difficult.

In these days it is almost superfluous to mention that a pre-

*The Bottini Operation for Hypertrophy of the Prostate, a Modification of Its Technic. Transactions American Institute of Homœopathy, 1900.

operative toilet is carefully made. A general anæsthetic should be given, except when age and depressed vitality forbid it: here I have been occasionally compelled to use cocain thereby causing but little distress. The simplest perineal operation is that employed to cure chronic cystitis where no appreciable obstruction exists, and all others pattern after this, differing but slightly in detail.

The lithotomy position is selected; the feet are fastened with anklets, or, preferably, held by assistants; a staff or guide is passed into the bladder, and held in place by an assistant, who also lifts the scrotal contents towards the upper surface of the perineum. The incision should be made in the Raphé, about one inch above the anus. Careful dissection through the deep fascia will reveal the urethra which is then incised. The staff is then withdrawn and the index finger inserted through the incision into the bladder, thus forcibly stretching its neck. Should too much contraction exist it will be necessary either to incise it, sear it with the Bottini knife, or divulse it with an especial dilator. The operation is completed by passing a drainage tube into the bladder and packing the wound with gauze. I usually employ a double drainage tube, made by stitching together two ordinary rubber tubes; this makes perfect drainage and irrigation possible since, by hanging a fountain syringe or an irrigator to the head of the bed and inserting its nozzle into the perineal tube, a constant flow may be maintained for hours, a desideratum in the event of clots or hæmorrhage, and sometimes a necessity in the treatment of cystitis. Unless urinary septicæmia or marked spasms occur, the tube should be retained for a week, when it should be removed and sounds passed into the bladder per urethra every five days until the wound closes. This method is usually employed, varying, naturally, with individual requirements.

Occasionally, however, hæmorrhages arise and consequently shock; such, however, indicates poor work, since in entering the bladder it is unnecessary to wound any vessels. Indeed it is almost unnecessary to employ hæmostats. This complication, however, is controllable by the irrigation device previously mentioned, using very warm one-half normal salt solution. Urinary septicæmia may occur, due either to careless preparation or to poor work. Its presence requires antiseptic irrigation and the administration of Aconite. Vesical spasms may arise, but will not if the

operator takes the precaution to thoroughly stretch the sphincters; such, however, may be controlled by administering Belladonna and employing irrigations. Should such means fail the tube must be replaced by one of smaller calibre or be removed entirely. .

Rarely fistula may follow due possibly to a too long retained drainage tube; this is an unfortunate complication, and one requiring painstaking care for its eradication; its discussion is not within the scope of this paper.

Departures from this technic are taken when one meets with certain types of strictures situated in the bulbo membranous region, such as hard, dense, fibrous strictures, or those of filiform calibre, or those practically impassable, or where fistulæ exist. Here attempts must be made to pass some instrument. Usually, after repeated efforts, a filiform will enter the bladder; this is threaded into a tunnelled staff, which is then used as a guide for perineal section, or the stricture may be divided within the urethra with a Maisonneuve urethrotome or the operation of Wheelhouse must be made, which, briefly, means passing a tunnelled staff with a rounded and curved end to the face of the stricture, then carefully cutting until the urethra is exposed then entering the knife above the strictured area and dividing the constricting bands. In some instances it will be impossible to pass any guide to or beyond the stricture, in which event it is usually necessary to operate blindly. The left forefinger should be inserted into the rectum, locating the lobes of the prostate; an incision should then be made in the Raphé and a careful search made for the entrance into the bladder. Such conditions necessarily increase the risk of operation, but having once entered the bladder the technic practically is the same as that outlined in my description of perineal cystotomy.

It must not be understood that I present a panacea for urinary diseases. I am simply enthusiastic about an operation which I have practiced many times with most satisfactory results.

DISCUSSION.

Dr. H. L. Northrop: I am very sorry not to have heard Dr. Ashcraft's paper on the subject of treatment of prostatic hypertrophy, because that subject is one of a number of very attractive ones to the general surgeon to-day, perhaps the most attractive one. It is certainly attracting a great deal of attention and inciting a

great deal of hard work upon the part of surgeons the world over. We all know that prostatic hypertrophy is the *bete noir* of old age, and possibly there is a selfish motive upon the part of surgeons to work so hard in this field. However, it is commendable work, and while we cannot say that the day of the catheter, or of catheter life will soon be a thing of the past, yet surely the use of the catheter by old men is going to be very much reduced in the future. There is a big difference of opinion as to the route by which the prostate should be removed. Those who favor the high route, the suprapubic or transvesical route, are just as enthusiastic as those who cut through the perineum. If I read reports in journals or text-books aright, I think the majority are swinging over to the transvesical or high method. The method through the peritoneum is more complicated. As Dr. Ashcraft intimated, it required a more elaborate technique and more elaborate instruments. It takes longer. It has to be done under a general anæsthetic, chloroform or ether. While there are several advocates in this country to-day of operating superpubically in two tempos, or in one, under nitrous oxide, the operation has been done in as short time as five minutes. Of course, we come back to the old fundamental rule, that we must select our cases. In small fibroids probably the perineal route would be in greater favor. In a large softer, more glandular fibroid the high route is to be preferred. We must remember, too, that the high route gives just as good, if not better, means of drainage as the peritoneal route. Before sitting down I would like to say that Dr. Ashcraft has referred to perineal cystotomy, and very properly. I believe we ought to have our attention called to this operation. It is not a trivial operation by any means. It is one of considerable magnitude. It is a major operation. It is one not to be undertaken without due consideration and proper precaution and preparation. There are many dangers attending it. At the same time it is an operation which is often an emergency one, and which we are called upon frequently to do in a hurry. The chief dangers, of course, are secondary hæmorrhage. He spoke of lightly packing the wound. Sometimes you will find it necessary to pack it very deeply. There is probably no more fruitful cause of consecutive hæmorrhage than a large perineal wound. Another danger which must not be lost sight of is renal insufficiency or suppression of urine, and acute hæmorrhagic nephritis. All of these are dangers which raise the mortality of the operation considerably.

DR. L. T. ASHCRAFT: I, in the main, agree with my friend, Dr. Northrop. Had I presented the paper originally intended I would have given my views on the subject of the high operation. It is a peculiar thing, but after all it seems to be the case that surgeons, so far as individual operations are concerned, in a certain part of the country, do nothing but supra-pubic operations; they ignore the perineal route. An hundred miles away they do nothing but perineal prostatectomy, and "pooh-pooh" that by the supra-pubic route. I do believe more prostates can be taken out successfully by the supra-pubic route than by the perineal, but I do not think it necessary to do what I consider the more dangerous operation when the less dangerous one will be the operation in selected cases.

THE SCOPOLAMIN-MORPHIN COMBINATION AS A GENERAL ANÆSTHETIC.

E. R. GREGG, M. D., PITTSBURG.

While we noted the appearance of Felix Terrier's article on this subject in the last issue of *International Clinics*, it was not until the articles of Seelig and Ries appeared in last month's *"Annals of Surgery"* that we became actively interested in this method. Up to and including these reports 1,488 cases were reported from Austria and Germany, 26 from France, and 137 from America.

On August 22d of this year we gave it our first trial, and since that time all of our operative cases except the accident and emergency ones have received this anæsthetic regardless of the patient's age, sex, color or condition. All of these cases were operated in the Pittsburg Homœopathic Hospital, two being eye cases operated by Dr. Wm. W. Blair, who kindly allowed our assistant, Dr. J. C Logan, to administer the anæsthetic and make the necessary observations, the others occurring in the course of our private and charity work. Dr. Howard Taylor, anæsthetist to the hospital, and House Surgeon Morris were most kind and painstaking in assisting in the work, and Dr. Logan gave much of his time in observing and tabulating the results.

Twenty-eight patients received the scopolamin-morphin combination, over thirty operations being performed. In one case, an alco-

holic, the patient roused up before the operation, and chloroform was administered, but his struggles were so fierce that Dr. Taylor preferred not to proceed with the anæsthetic; he was, therefore, returned to the ward, and a few days later was operated for hæmorrhoids under ether without the scopolamin-morphin when the stage of excitement was somewhat less. The following operations were performed on the remaining twenty-seven patients:

Appendectomy, three (with ventro-fixation 1); Schede varicotomy, two, and the following one each: Amputation of the thigh, excision of varicocele, skin grafting, sequestrotomy of the tibia, incision of abscess of the axilla, excision of tumor of the jaw, Edebohl's nephropexy, incision of abscess of the hip, tendon suture, secondary cataract operation, von Bergman's operation for hydrocele, incision of abscess of the jaw, repair of stump of leg, excision of scar of neck, excision of glands of neck, incision of abscess of the foot, excision of ulcer of the chest, curettage, trachelorrhaphy and perineorrhaphy, enucleation of eyeball excision of suppurating inguinal glands, drainage of the elbow joint, removal of abdominal drains, urethrotomy. The ages of the patients ranged from 8 to 73 years.

From the reports scopolamin seems to act better when given combined with morphia, the dosage and the time of administration being as yet an open question.

In all cases reported in this paper $^1/_{100}$ grain of scopolamin (P. D. & Co.) was given, combined with $^1/_6$ grain of morphia; three doses being given, usually one hour apart, and varying from one-half to three hours before operation.

In the ideal case the patient becomes drowsy shortly after the administration of the first hypodermic injection, and is sound asleep at the time of the second injection. This latter may, however cause him to open his eyes and move restlessly, but he will not be conscious if the drug is acting well. At the third injection no notice will be taken of the needle unless it be a slight involuntary motion of the hands, arms or lips; when taken to the operating room, one-half hour later, he will be profoundly unconscious. Strangely enough the patients, especially those who do not take the drug kindly, are more easily aroused by noise and motion than by pain. It is a good plan on that account to give the injections in a darkened and quiet room, and to bandage the eyes before moving

the patient to the operating room. Neither of these two precautions are absolutely necessary, however.

The pupils may dilate or may remain at midpoint, no constant relation having been observed between this sign and the amount of anæsthesia obtained by scopolamin-morphin alone. The cheeks assume a flush soon after the first injection, and the pulse improves in quality, though it may become slower or more rapid, varying greatly in different cases, but always becoming stronger. The respiration is usually slightly more rapid, shallow and *very* quiet, occasionally it is slow and stertorous.

Patients who are able to stand the operation without the addition of chloroform do not show signs of pain when the operation begins; their behavior is rather that of a person in a disturbed sleep. The motions are not those of pain nor toward the seat of the pain but are simply aimless motions. The only constant motions are the pursing of the lips and the movement of the hands toward the lower part of the face. No patient who has gone through the operation without chloroform has had the slightest recollection of anything that has happened after the first injection.

This, however, is the ideal case. In 28.6 per cent. of our cases it was unnecessary to give chloroform in the regular way, this being 2.6 per cent. better than the results reported in Terrier's series, and 3.6 per cent. better than Bloch's. But even at this percentage we have gained something by giving the scopolamin-morphin as shown by the following conclusions drawn from our data:

First. The stage of excitement which is present in a large percentage of cases of simple chloroform anæsthesia is much less likely to occur. When it does occur it is in no way altered, but in 67.9 per cent. of our cases there was no stage of excitement at all, and of the nine cases which did have a stage of excitement, three were alcoholics on whom the drug, in our experience, has very little effect.

Second. Less chloroform is necessary to induce and less necessary to maintain anæsthesia. In this series 6 c. c. was the average amount necessary to induce anæsthesia, and about 50 c. c. per 100 min. to maintain it. While this does not equal the German record of 16-18 c. c. per 100 min., it is a great improvement over von Miculicz's record of 80 c. c. per 100 min. in simple chloroform anæsthesia.

Third. The patients are much less susceptible to shock. Their

appearance is the ideal of what a patient should be under anæsthesia: color good, skin dry, or, if moist, never clammy, and pulse full (whether fast or slow).

After the operation the following points are noticed in favor of the new drug:

First. Pain was greatly alleviated in 18.5 per cent. of our cases, and was entirely absent in 63 per cent. In only 18.5 per cent. was it severe or what might be expected after the operation was performed. One patient had no pain in the stump of an amputated thigh for forty-four hours after the operation. In more than one case the patient awoke after the operation to ask when it would be his turn, and one man asked why the operation had been postponed.

Second. The nausea is greatly lessened. Only 28.6 per cent. of our cases were nauseated at all, and only 7.1 per cent. severely so.

Third. The vomiting is much less frequent, only 21.4 per cent. of our cases vomited. Best of all, when vomiting does occur it comes late, the patient being conscious enough to prevent choking. One case vomited as she left the table, but no other case vomited within two hours of leaving the table, and in some cases vomiting did not occur until twelve hours later, and then only once. This holds good as well after laparotomy as after other operations. To any one who has taken a general anæsthetic himself, these three points will demand consideration for the anæsthetic.

We noticed that during the operation in 18.5 per cent. of the cases there was much oozing from the field. This would seem to be readily explained by the vasomotor dilatation shown by the flush on the face, but we were unable to trace any constant relation between the depth of scopolamin-morphin anæsthesia, depth of flushing and the amount of oozing.

Another disadvantage is the rigidity of the abdominal walls which occurred in some of the cases of abdominal operation, whether chloroform was added or not. This may be persistent enough to cause considerable difficulty, especially in a complicated case.

Again, great thirst often follows the administration of scopolamin-morphin, but this is balanced by the fact that water is not nearly so apt to cause nausea, so that the thirst can be relieved. Slight headache sometimes follows, but in no case was it troublesome. In no case was there any ill effect noticed in the healing of the wounds, all the wounds healing as might have been expected in their re-

spective cases. Nor did the combination have any effect on the bowels, as this matter was carefully watched and no difficulty noted. Especial attention was paid to this phase in the abdominal cases. The urine showed nothing unusual.

To sum up: We have found the scopolamin-morphin combination to have the following advantages:

1. The period of anxiety previous to operation is done away with or greatly reduced.

2. There is much less liability to shock during the operation.

3. Chloroform can be added if necessary, and the same advantages maintained with the addition of the following:

4. There is seldom a stage of excitement, the patient usually drifting off peacefully to sleep.

5. The amount of chloroform necessary to induce and to maintain anæsthesia is greatly reduced.

6. Pain, nausea and vomiting are much less frequent and much less severe post-operative complications.

The disadvantages are as follows:

1. The liability to excessive oozing.

2. The rigidity of the abdominal walls.

3. The slight uncertainty of action, it being never possible to tell until the patient is in the operating room whether or not chloroform will have to be added.

4. The uncertainty, at present, as to the exact dosage and the best time of administration.

In general, the following observations were made:

1. The extremes of life seem to be the more susceptible to this anæsthetic.

2. The blacks do not take it well, a stage of excitement being present in three of our four colored cases, none of them being alcoholic.

3. The best time for administering the drug would seem to be 2½, 1½ and ½ hour before operation. In the six cases which did vomit, with one exception, it occurred in patients who had received the last injection 1¾ hours, or longer, before operation. Proving it the other way: Out of the seven cases which received the last injection from 1¾ hours or longer before the operation, only two escaped vomiting.

While we realize that this series is not an extensive one, we believe that our experience with scopolamin-morphin so far warrants

Name and Number	Age	Sex	Color	Condition	Operation	Time Injections Before Operation	Time of Operation	Amount of Anæsthetic	Stage of Excitement	
1. Berger	45	M	W	poor	Amputation thigh	1½, ½	45	none	none	Perfectly quiet, twitching ceased, pulse and resp. steady, gave no sign of feeling pain.
2. West	34	M	W	good	Schede varicotomy	2½, 1½, ½	60	30 cc.	none	Pupils active, pulse slowed and improved, became restless as if conscious of pain when Chlor. stopped.
3. Smith	42	M	W	alcoholic	Appendectomy	1½, ½	50	15 cc.	none	Patient resisted incision and Chl. was given; no effect on pupils, pulse or respiration.
4. Hall	22	M	B	good	Excision varicose veins of scrotum	2½, 1½, ½	15	10 cc.	moderate	Pulse and resp. increased; skin moist.
5. Harger	18	M	W	good	Skin grafting	2½, 1½, ½	25	15 cc.	none	Pupils contracted under Chloroform; patient quiet.
6. Hearon	28	M	B	fair	Sequestrotomy tibia	2, 1¼, ½	20	23 cc.	extreme	Face and limbs twitched, especially face, but patient gave no other sign of feeling pain.
7. Lawson	25	M	W	fair	Incision abscess of axilla	2, 1¼, ½	5	none	none	Patient remained quiet.
8. Mulchay	40	M	W	alcoholic	.....	3¼, 2½, 1½	.....	.....	.....	Patient struggled so when Chloroform was administered that Dr. Taylor refused to continue and the patient was returned to the ward.
9. Dietz	18	F	W	neurotic	Excision tumor jaw	6, 3¾, 1¾	7	12 cc.	none	Conditions same as before operation.
10. Artrip	22	F	W	neurotic	Nephropexy (Edeb.)	3½, 1¾	90	45 cc.	moderate	Skin moist at first, became dry later; abdomen contracted.
11. Killgore	40	F	W	fair	Appendectomy	3¾, 2¾, 1¾	50	50 cc.	none	Belly wall relaxed at first, but became tense; skin rather cool.
12. Hunter	23	M	W	fair	Abscess hip-joint (incision)	3½, 2¼, 1¼	40	25 cc.	none	Was never entirely relaxed, flexor muscles of arms always slightly contracted.
13. Desco	26	M	W	good	Tendon suture	2¼, 1¼, ½	120	85 cc.	none	No sign of shock; never deeply under; moved other arm and mumbled.
14. Brubaker	61	M	W	senile beginning	Secondary cataract	3¼, 2¼, 1¼	5	cocaine	none	Profoundly unconscious; Dr. Blair thought the Cocaine entirely unnecessary; any op. could have been done.

Before Operation				*After Operation*					
Pupils	*Pulse*	*Respiration*	*Color of Face*	*Nausea*	*Time of Vomiting*	*Pain*	*Thirst*	*Oozing*	
mid point	120 steady	24–28 shallow	flushed	absent	did not vomit	absent	great	normal	1
mid point	75 steady	16–20	flushed	absent	did not vomit	slight	great	normal	2
slight dil.	100 to 116	20–22	flushed	slight	7 hours after once only	slight	usual	normal	3
slight dil.	110 steady	20	flushed	absent	did not vomit	absent	usual	normal	4
dilated	90 steady	18	flushed	absent	did not vomit	absent	usual	normal	5
mid point	90 steady	20	flushed	absent	did not vomit	severe	usual	great	6
dilated	110 steady	28	flushed	absent	did not vomit	absent	usual	normal	7
.....	.....	.....	flushed	absent	did not vomit	.....	usual	normal	8
dilated	100 steady	very quiet	flushed	slight	did not vomit	slight	usual	normal	9
mid point	70 to 90	very quiet	pale	great	3 hours after several times	usual	great	great	10
mid point	slow, thin	very quiet	normal	great	at once and often after	slight	great	normal	11
dilated	80 steady	light	flushed	slight	did not vomit	usual	usual	normal	12
dilated	70 steady	slt. labored	flushed	absent	did not vomit	absent	usual	normal	13
mid point	60 steady	stertorous 18	slt. cyan.	absent	did not vomit	absent	usual	tourniq	14

	Name and Number	Age	Sex	Color	Condition	Operation	Time Injections Before Operation	Time of Operation	Amount of Anesthesia	Stage of Excitement	
15.	Brown	41	M	W	good	Hydrocele (Von Ber)	3¼, 2, 1	23	15 cc.	none	Pulse dropped markedly under Chlor., and varied with the amount given.
16.	Haberland	8	M	W	good	Incision abscess jaw	1½, ¾	3	none	none	Fretted and resisted, but acted more as one having bad dreams than one in pain.
17.	Willison	48	F	W	fair	Repair stump of leg	4¼, 2¾, 1¼	25	none	none	Constant motion of and putting hands to lips; hands picked at lips or covers constantly.
18.	Churchfield	22	M	W	good	Excision scar neck	3¾, 2¼, 1¼	35	23 cc.	none	Patient remained quiet.
19.	Cassidy	26	F	W	neurotic	Incision abscess foot	4, 3, 2	2	13 cc.	slight	Never completely under, and was very restless.
20.	Thomas	63	M	W	senile	Excision ulcer chest	4, 2½, 1½	5	none	none	Restless motions of hands, but not toward field of operation; no sign of pain.
21.	Jones	29	F	W	fair	Excision glands neck Curettage, trachelorraphy, perineorrhaphy Appendectomy, ventrofixation	4½, 2½, 1¾	10 35 41	25 cc.	none	Respiration became slightly more stertorous. Talked constantly, incoherently; complained of pain when perineum was operated Perfectly quiet.
22.	Brown	38	M	B	good	Enucleation eyeball	3½, 2½, 1½	23	17 cc.	extreme	Was very hard to keep under.
23.	Paulson	40	M	W	fair	Appendectomy	3¼, 1¾, ¾	20	none	none	Abdomen very rigid; hands and arms rigid and in constant motion; hands to lips; no evidence of pain.
24.	Dorsay	25	M	W	alcoholic	Excision suppurating inguinal glands	3¾, 2¼, 1¼	12	18 cc.	extreme	Hard to keep under, came out easily and struggled a good bit.
25.	Wells	73	M	B	senile	Schede varicotomy	4¼, 2¾, ¾	30	none	none	Had to be restrained throughout.
26.	Hastings	22	F	W	good	Drainage elbow-joint	6¼, 4¾, 3¾	7	15 cc.	none	Very quiet
27.	Harris	21	M	W	fair	Removal abdom. drains	5¼, 3¾, 2¼	12	25 cc.	very slight	Belly not entirely relaxed.
28.	Kelly	32	M	W	fair alcoholic	Urethrotomy	3¾, 2¼, 1¼	20	17 cc.	short, but severe	Resisted several times.

Before Operation				*After Operation*					
Pupils	*Pulse*	*Respiration*	*Color of Face*	*Nausea*	*Time of Vomiting*	*Pain*	*Thirst*	*Oozing*	
slight dil.	110	normal	flushed	absent	did not vomit	absent	absent	normal	15
slight dil.	90 steady	4–6 very full	normal	absent	did not vomit	absent	absent	normal	16
dilated	100 steady	4–6 very full	flushed	absent	did not vomit	severe	absent	normal	17
mid point	irregular	normal	flushed moist	absent	did not vomit	absent	usual	great	18
mid point	60 to 90	irregular	flushed	slight	once 2¾ hours	absent	absent	great	19
mid point	90 steady	slow and full	cyanotic	absent	did not vomit	absent	absent	great	20
slight dil.	100 steady	normal	normal						
slight dil.	90 steady	slt. labored	normal	slight	4 and 6 hours after vomited; greatly relieved then, but returned slightly	slight	less	normal	21
dilated	90 steady	very quiet	normal						
mid point	74 steady	labored	.....	absent	did not vomit	absent	absent	normal	22
mid point	90 steady	normal	sallow	late, slight	not at all	absent	absent	normal	23
slight dil.	irregular	stertorous	cyanotic	absent	did not vomit	absent	absent	normal	24
contracted	90	slow and deep	.....	absent	did not vomit	absent	usual	normal	25
mid point	70	normal	slt. flushed	absent	did vomit once 10 hours after	severe	usual	normal	26
dilated	70	normal	flushed	absent	did not vomit	absent	slight	some ex	27
dilated	80	normal	flushed	absent	did not vomit	absent	great	normal	28

the statement that it will prove to be of great advantage in many cases, and we propose to continue its use so long as it appears to work satisfactorily.

(The observations recorded in this paper are tabulated on pp. 154, 155, 156 and 157.)

DISCUSSION.

DR. Z. T. MILLER: I would like to ask the doctor whether this anæsthetic has ever been used in obstetrical practice?

DR. E. R. GREGG: Not that I know of. The only use I know of outside of surgery was, when first brought out by Schneiderman, he used it as a hypnotic on insane patients.

DR. C. P. SEIP: This is a new anæsthetic to a majority of the profession. While I have never used it myself, I saw a number of the cases related by Dr. Gregg, and you would be surprised to see the patient lying there, with eyes wide open part of the time, yet knowing nothing that is going on about him. Not a drop of chloroform or ether had been given, and yet they lay perfectly quiet, with the face flushed, and really seemed to be in a natural sleep, breathing easily, and some I saw showed not the least evidence of pain. I think it is destined to be a great help to the surgeon. We know with what great fear and trembling we sometimes give an anæsthetic, especially chloroform. The suggestion just made by Dr. Miller that it might be applicable in cases of obstetrics I think should be taken into consideration, and I believe in the first case of obstetrics I have after I get home I am going to try it. It certainly does no harm to the patient.

FRACTURE OF THE VERTEBRAL COLUMN COMPLICATED BY PREGNANCY.

H. L. NORTHROP, M. D., PHILADELPHIA.

No fracture of any part of the skeleton can equal for severity of symptoms for number of complications, or for high mortality, and no fracture defies treatment so potently or with like obstinacy, as a fracture of the bony axis of the skeleton. Much of this is to be explained, of course, by the associated and irreparable damage done at the moment of the injury to the vital nerve centers and nerve fibres constituting the spinal cord. The seriousness of this kind of injury, the ease and frequency with which the spinal cord is so severely damaged, is to be further explained by the architecture of the vertebral column.

The bodies, or centra, of the vertebræ consist of a delicate, light weight cancellated structure, enveloped by a very thin layer of compact bone, a material which is easily crushed; the arches and processes, united together at many and various angles, contributing a source of weakness, are thereby ineffective when called upon to resist any special pressure or blow from without, and like the "wish-bone" in the hands of the child snap asunder and perhaps penetrate the contents of the neural canal. Moreover, it should not be forgotten that the cord consists of bundles of fibres and supplies peripheral areas which do not and cannot receive their innervation from any other source.

Let us turn for a moment to the skull, to note the effect of a blow upon the cranial wall, and let it be a hard one. Because of the arches of the cranial vault the force of a blow received at one point is scattered and may be spent upon parts remote. The result, in many cases, is an extensive, or, at least, a pronounced fracture of the skull wall, perhaps at the point of impact, perhaps at a point opposite to it. This fracture may be extensive enough to permit the rent in the skull wall to be more or less freely opened or closed by the operator, as he would open or pry apart the two shells of an oyster or a clam. But the patient makes a prompt and complete recovery, without paralysis, either motor or sensory, because the contents of the cranial cavity have either suffered no permanent

harm, or, if the cortex has been lacerated, the conduction paths are untouched. The violence received has been sufficient to seriously disturb the integrity of the skull wall, but the curves and arches of the calvarium have had a potent effect in distributing and scattering the force of the blow, hence its full effect was not concentrated at a single point.

Suppose, however, that the gray cortex has been lacerated. What is the result? A large number of nerve cells suffer from the traumatism, and, perhaps, also many fibres are divided, but no motor or sensory disturbance of any appreciable degree follows. This is because associated fibres and cells intimately related by anatomical contiguity, if not by continuity, to those destroyed, take up their function, and the nerve impulses are transmitted as before.

How different the result when the conduction fibres of the cord are involved and their continuity is interfered with.

It is by such a comparison as this of the architecture of skull and vertebral column that we can satisfactorily explain the widely differing results of a fracture of different parts of the cranio-vertebral axis, and the much more disastrous results attending a fracture of its vertebral division.

A glance at the skeleton shows that the weakest part of the column is at the junction of the thoracic and lumbar sections, including the last two thoracic and first two lumbar segments. It is so because it has to bear nearly as much weight as the part of the column below it, and its vertebræ are relatively small; it forms the most concave part of the dorso-lumbar curve known as the "hollow of the back," and the circumference of the trunk is less here, at "the waist," than elsewhere. Again, it is near the middle of the column, so that greater leverage can be brought to bear upon it than upon any other part. Finally, the segments of the column immediately above it are for the most part fixed, hence a greater area or extent of body surface is moved upon the dorso-lumbar junction, which, because of the fixity of the segments above, possesses and requires greater mobility. It is here that fatigue and the prodromal aching of a fever are first felt.

We see several reasons for regarding the junction of the thoracic and lumbar sections of the column as its weakest point, and would naturally expect fracture to occur here more frequently than elsewhere, and so it does.

Fortunately, fractures of the vertebral column are comparatively

rare. They constitute about 3 per cent. of all fractures, and occur more frequently in adult males, for occupational reasons, than in women or children.

The fracture is associated with a dislocation of the vertebral body in 60 per cent. of all cases, only 1-5 of the cases being a fracture alone, and about the same number a dislocation alone. Hence, the propriety of referring to the majority of these cases as "fracture-dislocations." The violence which is sufficient to fracture the arch or crush the vertebral body is usually sufficient also to forcibly dislocate the vertebræ, or to produce enough hyper-extension or forced flexion to do it.

Fractures of the cervical vertebræ occur with about equal frequency with fractures of the thoracic; fractures of the lumbar vertebræ are rare. The vertebræ most commonly fractured are the 5th and 6th cervical, the 12th thoracic, and the 1st lumbar. Of these the cervical fractures are attended by the highest mortality.

Fracture-dislocations are produced by both direct and indirect violence. An example of the latter is when a fracture of the vertebral column occurs from a blow upon the head, made by a falling object or by striking the head against a bridge or an archway, while riding or driving under.

A common cause of fracture of the spine is forced flexion, a blow upon the head forcing the head forward upon the chest, or the chest upon the pelvis. When the violence is direct the degree of injury inflicted depends largely upon its force, whether the result is merely a fracture of the arch, or this combined with a dislocation or a crush of the vertebral body.

The symptoms of vertebral fracture are shock, usually quite pronounced; pain, more particularly when being moved, and referred to the back (seat of injury); swelling, fluctuation, ecchymosis and quite frequently abnormal mobility and crepitus are also present. The local symptoms, let it be understood, may be insignificant, indefinite or absent entirely, but the fracture-dislocation may be there, its presence not disclosed by any local surface manifestations.

As to the exact location of the cord lesion, an accurate knowledge of the distribution of the spinal nerves, must be brought into play. The motor supply must be investigated carefully, and the sensory distribution must be traced most accurately.

A complete anatomical description of this is, of course, beyond

the limits of my paper. Let it suffice to say that fracture of the lower end of the cervical column will involve the ulnar nerve, which supplies the majority of the intrinsic muscles of the hand and whose sensory distribution is well known. If the injury is above the 6th cervical vertebra, the entire upper extremity will be anæsthetic except the outer side of arm and forearm and the radial side of thumb.

A lesion of the cord at the level of the 4th or 5th cervical vertebra involves the origin of the phrenic nerve. The diaphragm will be paralyzed and death will occur in a few hours.

Injuries of the thoracic vertebræ are more easily diagnosed because of the simple distribution of the intercostal nerves, and are to be located by the area of anæsthesia, more particularly, which extends in a general way to the level of the bony and the central lesion. The integument surrounding the umbilicus is supplied by the 10th thoracic nerve.

The spinal cord ends at the upper border of the 2d lumbar vertebra. An injury below this involves, of course, the cauda equina, and there will be partial or complete paralysis of the lower extremities.

The prognosis is usually the worst possible. The higher the lesion the graver the outlook. If the injury is to the cervical section, shock is greater and the result is apt to be quickly fatal. The cases which recover from the immediate effects live for six months to two years, and die from the usual and ultimately unavoidable complications, viz., general exhaustion, muscular wasting, bed sores. If the fracture is in the thoracic area cystitis and pyelitis are more frequent, if in the upper thoracic or lower cervical region traumatic and hypostatic pneumonia are prone to develop early.

As to treatment, operation is indicated in all cases where the spinal injury is the only serious one and the shock is not too profound. It is demanded in all cases of partial lesion, as where the neural arch only is fractured; and in all injuries involving the cauda equina. It consists of a laminectomy, *i. e.*, a removal of at least the fractured arch or arches, including, of course, spinous processes and laminæ, and the further removal of blood clot, or anything else that is causing pressure on the contents of the neural canal.

The after-treatment must include the use of a water bed and

all possible resources for the prevention of bed sores, cystitis, pneumonia, etc.

Three cases of vertebral fracture have come under my care during the past ten months. I wish to describe and report one of these, the most interesting and instructive, because the patient was six months pregnant.

Mrs. L., age 35, was carrying her two-year-old child in her arms on last Good Friday afternoon, when a severe wind storm arose and blew over a large bill board, which struck Mrs. L. on the back. She fell with the child beneath her, but the latter was unharmed. Mrs. L. was taken to Hahnemann Hospital, profoundly shocked, and an examination showed complete paralysis of both lower extremities, the surface anæsthesia reaching as high as the iliac crests. At the dorso-lumbar junction there was a broad fluctuating hæmatoma, while an ecchymosis around both eyes began to appear when she was admitted, and soon became an extensive bilateral extravasation. But there had been no injury, not even a bruise, to the head, and her mental condition was unimpaired. This bilateral ecchymosis beneath the eyelids is usually indicative of a fracture at the base of the skull, which was not present in this case, however, and the only way to explain the symmetrical hæmorrhage into the orbital cavities is by recognizing the unbroken continuity of the subarachnoid space around both cord and brain, and the possibility of a large extravasation of blood into this space finding its way from around the cord, through the foramen magnum into the cisterna magna of the arachnoid system, thence through the sphenoidal fissure into the fat and connective tissue of the orbit. And I am convinced that this is just what happepned.

Mrs. L. was six months pregnant.

Under ether I made a longitudinal incision down through the hæmatoma, revealing a fracture of the 12th thoracic and 1st lumbar arches, and a complete separation between the bodies of these same vertebræ. Removing the broken arches I found a very extensive hæmorrhage into the neural canal while the spinal cord was flattened and tightly drawn across the bodies of the dislocated vertebræ. In order to overcome this displacement I made traction upon both lower extremities when a large volume of blood poured, apparently, from the abdominal cavity, making me fear at first that the inferior cava had been lacerated. The hæmorrhage

probably came from a lumbar vein close to its junction with the cava.

Gauze pressure was employed to control the hæmorrhage (the traction also had to be relinquished), and Mrs. L. recovered nicely from the shock of the accident and operation.

Much speculation was now indulged in as to what would become of the contents of the uterus, and several expressed the view that because of the traumatism to the cord the uterus could not empty itself, and if emptied the uterine muscle could not contract. However, eight days after the accident expulsive pains did set in, lasted for eighteen hours, and the uterus emptied itself completely of a dead, decomposing fœtus. There was no hæmorrhage and no puerperal sepsis.

Mrs. L. is still living, permanently paralyzed from iliac crests down.

The explanation of the possibility of this quite normal miscarriage is to be found in the nerve supply to the uterus, which is very largely through the sympathetic nervous system, and but slightly from the spinal cord. The uterus receives nerves chiefly from a plexus placed in the neighborhood of the cervix, to which the name cervical ganglion or, better, the plexus utero-vaginalis is given. This plexus is continuous with the hypogastric plexus, both belonging to the sympathetic system. The uterus also receives fibres directly from the hypogastric plexus through the utero-sacral ligaments, and, finally, a few fibres from the third and fourth sacral nerves, derived from the spinal cord.

I do not know of any other case of fracture of the vertebræ occurring during pregnancy having been reported, and for this reason and because of several unique fractures coexisting I feel that my report deserves a corner in the transactions of this Society.

REPORT OF THE

SECTION OF PATHOLOGY AND PATHOLOGICAL ANATOMY.

Purpura Hæmorrhagica, by J. E. Belville, M. D.

PURPURA HÆMORRHAGICA.

J. E. BELVILLE, M. D., PHILADELPHIA.

The title of this brief paper would more appropriately read "A Contribution to the Study of the Pathologic Conditions Underlying Purpura." While numerous varieties of this disease have been described and various classifications attempted, the present day tendency is to view the various manifestations of the disease simply as differentiated by greater or less severity, and to group them under two general heads: first, the symptomatic or secondary purpura, and second, the arthritic; under the latter are classed the hæmorrhagic purpura. We may, however, have the hæmorrhagic variety minus the joint complication occurring in secondary or symptomatic purpura. They are all characterized by the same general symptoms from the mild cases with small petechiæ distributed chiefly over the extensor surfaces to those with extensive hæmorrhage into the skin with free hæmorrhage from mucous surfaces.

We find symptomatic purpura occurring during or following small-pox, measles, scarlatina, and, as demonstrated in one of my own cases, as a sequela of grippe. As the hæmorrhage into the petechial spots in the skin and the free hæmorrhage from mucous surfaces both take place from the capillaries, it would help our understanding of the condition to review for a moment the structure of the capillaries and the conditions affecting their calibre and the blood pressure within them. As we pass from the arterial to the venous system there is a gradual simplification of the vessel walls.

the muscular coat gradually disappearing and with it the adventitia, until, when the capillaries are reached, their walls consist of a single layer of flat epithelial cells united together along their borders by a small amount of cement substance. The protoplasm of these cells possesses the power of contractility and dilatability. Some interesting experiments made in the Johns Hopkins laboratories have demonstrated that supra-renal extract acts by causing contraction of the protoplasm of these cells, a point which will be referred to later. The fact of the blood pressure being greatest in the smaller arteries and in the capillaries, and increased in the latter by dilatation of the vessels supplying the capillary area, has considerable bearing upon the occurrence of purpuric symptoms following an attack of grippe and would seem to afford an explanation of the occurrence of purpuric spots and hæmorrhage as well. When we remember the profound vasomotor depression characterizing the disease we can understand the development to a high degree of one of the factors in the production of the symptoms, viz., stasis in the capillary system, thus producing excessive dilatation of the capillaries and stretching of the epithelial cells to their utmost limit with a corresponding increase in their permeability. To this stasis must be added a changed condition of the blood manifesting itself in a decrease in its coagulability. The time required for coagulation of normal blood, as measured by means of Wright's tubes, being from two to five minutes, while in purpura hæmorrhagica coagulation does not take place until from ten to fifteen minutes. Another deviation from the normal in this respect has been observed in these cases in that in hæmorrhage with normal blood conditions the last amounts of blood coagulate with the greatest rapidity, while in purpura hæmorrhagica the reverse is the case a point which was demonstrated in the case previously cited. Large numbers of clots were at first vomited while later the blood both from nasal hæmorrhage and that vomited showed but little if any tendency to clot.

In the arthritic form of the disease which presents the severest manifestations of purpura hæmorrhagica, a bacterial infection seems to have been conclusively demonstrated. An organism known as the bacillus purpura was demonstrated by Petrone, in 1884. Cultures of the bacillus made from the blood of a patient with a long-lasting attack of purpura hæmorrhagica when injected into the peritoneal cavity of rabbits produced the characteristic symp-

toms of the disease, petechial spots and hæmorrhages from the stomach and intestines. Kolb, in 1891, found in a number of cases examined by him, a round-ended bacillus, staining with methylene blue and the Gram-Weigert method. This bacillus was named the bacillus hæmorrhagici, and was found in the blood vessels particularly, but also in the intestinal tissue of internal organs and in the skin in the hæmorrhagic areas. In the vessels the bacilli showed a tendency to arrange themselves in threads; Letzerich experimenting with cultures of the bacillus found that they produced stasis in the capillaries, and that by the action of their toxin upon the albumen of the blood, hyaline plugs were formed occluding the vessels, thus giving rise to hæmorrhage. Some authorities consider the symptoms to arise from hyaline degeneration of the vessel walls, but that the change taking place in the vessels are functional rather than anatomical would seem to be indicated by the evanescent character of the lesions, and from the rapidity of their development; conditions which would scarcely be presented were there gross anatomical lesions of the vessels. It would seem, then, that the two most constant factors in the development of purpura hæmorrhagica are the vasomotor changes leading to stasis and the diminished coagulability of the blood.

The justification for occupying your time with this subject lies in the practical influence upon treatment of this view of the subject which would seem to be borne out by results. The use of adrenalin for its tonic effect upon the protoplasm of the cells forming the walls of the capillaries and of Calcium chloride to increase the coagulability of the blood.

REPORT OF THE

SECTION OF SANITARY SCIENCE.

The Cause and Prevention of Yellow Fever, by J. D. Boileau, M. D.

Milk as a Factor in the Causation and Spread of Infectious Diseases, by C. O. W. Bartine, M. D.

Tonics and Stimulants, by Edward Cranch, M. D.

Potable Waters; Their Differences and Our Consequent Choice, by William Erwin, M. D.

Instituting and Maintaining the Quarantine, by G. W. Hartman, M. D.

Contagions, Infections and Toxæmias as Factors in the Causation of Disease, by W. H. Holsberg, M. D.

Salt, a Pillar of Antiseptics, by D. W. Straub, M. D.

The Effect of the Sanitary Condition of Schools on the Health of Children, by R. S. Summers, M. D.

Regime, by R. E. Tomlin, M. D.

THE CAUSE AND PREVENTION OF YELLOW FEVER.

J. D. BOILEAU, M. D., PHILADELPHIA.

Yellow fever has long been recognized as an acute, specific, infectious disease, but not until recently has the nature of the infection, nor the manner of transmission, been understood. In 1881, Dr. Carlos Finlay, of Habana, advanced the theory of the propagation of the disease by the mosquito, believing at that time that the disease was transmitted mechanically by the proboscis. In 1887 he modified this somewhat, having isolated from the mosquito what he believed to be the specific organism. He, from time to time, advanced additional theories to which but little attention was given until the propagation of malaria was shown to be due to anopheles. The Medical Board of the U. S. Army, composed of Reed, Carroll and Lazear, was the first to furnish proof of Finlay's theories. In a preliminary report submitted in 1900 they reported having produced a severe and well marked case of yellow fever by the bites of mosquitoes, which, from two to twelve days previously, had bitten cases of yellow fever on the first and second days of the disease.

Before the Pan-American Medical Congress in Havana, Feb-

ruary, 1901, a second report was submitted by Major Reed, in which the preliminary report was confirmed by additional cases and data on the conveyance of the disease by the mosquito.

July, 1901, Reed and Carroll submitted an additional report, showing that yellow fever could be transmitted by direct inoculation of blood from a case of yellow fever to a non-immune. They also made investigations which tend to prove that the whole blood was not necessary to produce the disease; first, by using serum, and, later, using serum diluted with normal salt solution and filtered through a Beckefeld filter, the infectious principle was transferred and caused the disease as readily as did the whole blood."

In April, 1902, Walter Wyman, Surgeon General M. H. S., ordered Assistant Surgeon H. P. Parker with Acting Assistant Surgeons Geo. E. Beyer and O. L. Pothier to proceed to Vera Cruz, Mexico, as a working party, and work in conjunction with the Yellow Fever Institute. They arrived in Vera Cruz May 12, 1902, and returned the following October, submitting their report in February, 1903. Careful examination of the blood of those suffering from yellow fever was made, and the following observation noted:

Red blood cells presented no visible variation from the cells of a normal individual. In the latter days of the disease there was an increase in count of red cells, but this is believed to be relatively due to dissipation of fluids. Hæmoglobin was proportionate to the number of red cells.

White cells no variation from the normal, either in count and reaction to stains.

Plasma. Every technique known was used, but the results were negative. Bacteriologic examination of the blood during life were all negative.

Serum agglutination. "The organisms used were B. icteroids, of Sanarelli; B. typhosus; B. dysenteriæ, Shega, and the B. coli communis; all of these organisms had reacted typically to their species. In every instance the result was negative, both under the microscope and in the test tube.

"Bacteriologic examination of organs at necroscopy, in which inoculation from the spleen, liver, kidneys and heart blood of virulent, uncomplicated cases were used, no organism was encountered with sufficient regularity to suggest a conclusion, other than that in typical uncomplicated cases of yellow fever. In young adults

the blood and organs were found to be free from vegetable organisms."

The working party then directed their investigation to the mosquito. The "stegomyia fasciata" having been bred for purposes of experimentation were allowed to feed on a severe case of yellow fever during the first three days of the disease, and after being kept a variable time were killed and prepared by section and staining for microscopic examination. This revealed in the stomach of the stegomyia small fusiform shaped protozoa, which undergo successive changes, ultimately resulting in sporozoites which find their way into the salivary glands, and are naturally discharged by the insect in the act of feeding.

Continuing, the report says: "Not only we, but others have made a careful study of the blood in cases of yellow fever without finding any structure which could be legitimately interpreted as the schizogonic cycle of the parasite under discussion." Other mosquitoes after being allowed to feed on cases of yellow fever, and kept varying times, were allowed to feed on non-immunes, invariably resulted in the person bitten developing the disease.

These experiments were repeated again and again, are being taken to exclude error, with the result that the mosquito could be infected by being allowed to feed on a yellow fever patient, and that the mosquito in turn produced the disease in the non-immune.

The conclusions drawn from these experiments, and many others, resulted in the Bureau of Health and Marine Hospital Service issuing a pamphlet as recent as July 31, 1905, from which the following is taken: It is headed, "How to Prevent Yellow Fever; no Mosquitoes, no Yellow Fever."

The infection of yellow fever is carried by mosquitoes, and by no other means is the infection spread.

Persons take the disease by being bitten by mosquitoes that have previously bitten a yellow fever patient.

The mosquitoes to become infected must bite a yellow fever patient during the first three days of his attack. These first three days therefore are the most important time for preventing the access of mosquitoes to a fever patient.

It is often difficult to decide during the first three days whether a patient has yellow fever, hence the necessity in threatened communities of placing a mosquito bar immediately around every patient who has fever of any kind, and for three days at least.

FACTS ABOUT SCREENING.

1. The netting used should have meshes fine enough to prevent the passage of mosquitoes (at least 18-20 meshes to the inch).

2. It is important to screen the windows and doors of the house. It is doubly important to screen the beds of fever patients.

3. Mosquitoes can bite through mosquito nets when any part of the patient's body is in contact with the netting.

4. Frequent examination should be made to see that there are no torn places in the netting or that no mosquitoes have found a lodgment inside.

5. The netting should be well tucked in to keep mosquitoes from entering.

6. If mosquitoes are found within the netting they should be killed inside and not merely driven or shaken out.

7. All cases of fever should be promptly reported to the local health officer. Awaiting his arrival they should be covered with a mosquito bar.

FACTS BEARING ON MOSQUITO DESTRUCTION.

1. Mosquitoes live in the vicinity in which they breed. They do not often fly a long distance.

2. Mosquitoes breed only in water; usually in artificial collections of fresh water.

3. The young mosquito, or wriggler, lives in water at least seven to twelve days.

4. Although the wrigglers live in water, they must come frequently to the surface to breathe.

5. Coal oil on the surface of water prevents the wrigglers from breathing.

6. Destroy the breeding places and you will destroy the mosquitoes.

7. Empty the water from all tubs, buckets, cans, flower pots, vases once every forty-eight hours.

8. Fill or drain all pools, ditches, unfilled postholes and the like.

9. Change regularly every day all water needed in chicken coops, kennels, etc.

10. Treat with coal oil all standing water which cannot be screened or drained (one ounce of oil will cover fifteen square

feet of surface). The oil does not affect the water for use if the water is drawn from below.

11. Where oil is appplied to standing water it must be distributed evenly over the surface.

12. Put fine wire netting over cisterns, wells and tanks of water in everyday use.

13. Places in which it is undesirable to put oil, such as watering troughs for stock, lily ponds, and so forth, can be kept free from wrigglers by putting in gold fish or minnows.

14. Clean away all weeds, grass and bushes about ditches, ponds and other possible breeding places, since these afford a hiding place for the mosquitoes.

15. Clean up vacant lots and back yards of all cans, tins, bottles and rubbish.

16. First do away with, or treat, all places where mosquitoes are known to breed, and then begin to work on places where they might breed.

17. Inspect and treat with coal oil gutters, culverts, ditches, manholes, catching basins, etc., along the roadside. Manhole covers should be screened.

18. Houses should be cleared of mosquitoes by burning one pound of insect powder or two pounds of sulphur to 1,000 cubic feet of space. The mosquitoes will fall to the floor and should be collected and burned.

19. Success in mosquito destruction depends upon the co-operation of the members of the entire community.

20. While the infection of yellow fever is carried by a single species of mosquito (the stegomyia), to insure its destruction it is necessary to destroy all mosquitoes.

In places liable to yellow fever both individuals and communities have an effective method of protecting themselves, as indicated above. Use the mosquito bar at once over all cases of fever until the danger from yellow fever has passed. Destroy all mosquitoes.

DISCUSSION.

DR. W. G. DIETZ: I take it that it is generally admitted that the use of coal oil as a remedy against mosquitoes is not that the coal oil directly kills the mosquito, but that it prevents the develop-

ment of the larvæ, because the larvæ of all mosquitoes invariably inhabit water or swampy places.

Dr. S. W. S. Dinsmore: Coal oil makes a film on the water and prevents larvæ from getting a supply of oxygen from the air, as it enters their breathing pores and occludes them.

MILK AS A FACTOR IN THE CAUSATION AND SPREAD OF INFECTIOUS DISEASES.

CHARLES ORIN W. BARTINE, M. D., PHILADELPHIA.

Milk is supposed to act as a carrier of disease, or to cause some functiontl disturbance through infectious or poisonous matters originally present in the diseased animals, or may be contaminated from without. The dangers in connection with this particular item of food may be said to be due to dangerous accidental contamination from carelessness, ignorance or to the dishonesty of dealers in diluting their milk with impure water laden with bacteria of numerous kinds; and, assuming these things to be facts, the public is paying dearly every year for a general lack of education in that most important branch of agriculture known as dairy farming. There are several methods by which milk can become infected, among which are, the use of foul water at the dairy farm, which, by means of bad drainage, has become infected with human excreta from some cesspool laden with typhoid or other bacillus washed into the supply of drinking water or water used to wash cans, etc. These, with carelessness in the handling of live stock, dirty animals, foul stables and filthy condition of the cans in which the milk is shipped, go a great way toward filling up our hospitals with typhoid fever and other diseases. Other dangers here confront us. Milk is put in cans warm and allowed to remain in the sun on station platforms for five or six hours before shipment; it is then taken to the milk station and from thence by wholesale dealers to factories and retailers, and here again it is treated to a generous supply of—let us hope—clean water; after having been carried around for two or three hours it is fed to some already sick infant.

When one considers the many diseases which have already been proven, and of others suspected of being of bacterial origin, and

that milk is one of the best of culture medias, especially for the pathogenetic form, and also liable to changes of a putrefactive and fermentative nature with the production of ptomaines or poisonous alkaloids, and that quite apart from any specific infection or fermentation the secretion is influenced in various ways beyond the power of the microscope or analysis to determine, as by a febrile disturbance; disorders of nutrition, including the excretory functions, and even by mental emotions; one cannot wonder at its being often unwholesome or even poisonous under such conditions, and a very frequent vehicle of infectious diseases. Apart from the common occurrence of milk souring in transportation and the putrefactive changes due to the bacilli coli communis and other saprophytic bacteria, another peculiar phenomenon has been observed, viz., milk when subject to the agitation of transportation in hot weather, without having been previously cooled before shipment, gives rise to trouble of a very severe and serious nature through the generation of tyrotoxin. In several instances epidemics have started due to this cause, which have proven obstinate. In the *Medical News* of September, 1898, Dr. W. K. Newton, of Long Branch, N. J., reports an epidemic, which upon first observation, looked like true cholera. "In one of the small hotels of this place thirty-six guests of forty-two in the hotel at the time were compelled to suffer severe pain, cold sweats, marked prostration with violent vomiting and purging and a terrible burning of the whole intestinal canal, which in one week was followed in another small hotel in the same place by another epidemic of precisely the same nature. Upon investigation it was found that the milk supply of both houses was procured from the same dealer, who in turn had purchased his milk from a dairyman who has a large, fine, healthy stock but upon analysis of the milk the cans were found to contain bacteria and tyrotoxin, which was claimed to have been due to being in a hurry to ship his milk. Dairyman had, without any cooling, loaded it into a train with the foregoing result; tyrotoxin, which caused the entire epidemic. Thus milk may become a factor in the spread of disease, without any diseased condition of the herd or any contamination from without, but simply by its own action plus closed up animal heat, producing a poison which at times is sufficient to kill.

Inasmuch as milk is one of the most universally trusted and widely employed of foods, and that cows are known to suffer seri-

ously and largely from tuberculosis, which in the human family surpasses all other diseases as an agent of death, it naturally falls under the gravest suspicions and not without just cause. Satisfactory proof of any such complicity as is suspected is, however, very difficult to obtain, since the one fact that the disease progresses so slowly covers up traces of infection which otherwise could be obtained, a cow suffering with a tubercular infection of the udder would give an excretion loaded with the tubercular bacilli; but it would not be necessary for the udder to be the seat of infection to have an excretion infected with bacillus, by means of excreta of the body being by careless handling, licking of filth from the body, etc., being transferred to the milk by indirect means.

As to the question of the infectiveness of bovine tuberculosis being transferred to mankind, let us look into the following cases:

Broudle, of Germany, reports a case in which six children and seven adults, all of different families, without any discoverable predisposition or hereditary taint, all inmates of a convent, developed an acute intestinal tuberculosis which proved fatal. Upon a careful investigation it was found that all the cows on the place were healthy except one, which had an active tuberculosis of the udder.

Deimur, of Bern, reports an instance in which four healthy children (all bottle fed babies), fed exclusively on milk from the same cow, developed an acute tuberculosis of the intestines. It was afterward proven by post-mortem examination that the intestines, stomach and spleen were studded with tubercles. The cow was found to have a tubercular udder.

Here, with your permission, I wish to quote some statistics gathered in the course of my duties as a Medical Inspector for the City of Philadelphia during the last eighteen months. That you may thoroughly understand how these statistics were gathered let me state that one of the duties of a medical inspector is to investigate every case of infant death referred to him from the Registration Bureau of the Board of Health, due to intestinal and some few other causes, and in this investigation he must make out a report stating on what food the infant had been fed preceding the illness, and upon what food it had been fed from the incipiency of the illness until death. In doing this work I have attempted to get a history of the parents, as to their physical condition, etc., with the following results:

In a series of 100 infant deaths in 18 months 27, or a little over 25 per cent., had been breast fed babies before their illness. Out of these 27 were 18 who died of intestinal tuberculosis. Of this number two were found who were of an active tubercular parentage on the father's side, and four had been nursing from tubercular mothers, two of whom have since died of this disease. One other mother denied any knowledge of being ill, but it was evident she was terribly emaciated, and had, as she admitted, night sweats and attacks of coughing spells. So we might say that the 25 per cent. who had tubercular paernts were either directly infected by the mother's milk, or like the remaining 75 per cent., had the predisposition and had become infected through some unknown medium, and could not, therefore have their deaths attributed to a direct milk infection. In one case, through the aid of the family physician, we were able to procure a sample of the mother's milk on the day the baby died. This, on microscopical examination, revealed the presence of staphylococcus pyogenes aureus, but as there was no evidence of any localized tubercular lesion in the breast we could hardly expect to find the tubercle bacilli; the milk, upon being injected into two guinea pigs, did not show any positive result, as one died in a week's time from some unknown cause and the other was killed at the end of four months, at which time the only evidence found was at the point of injection, where a small granular body which resembled a tubercle, which, under the microscope, could give no positive information. There are other conditions which are positively proven to have been carried through the distribution of milk. In the last quarter of a century about one hundred epidemics of typhoid fever reported have had their origin attributed, and we may say fairly proven, to milk supplies. In Glasgow in 1880, an epidemic, which affected about 500 people, with 129 deaths was noted. In this case nearly all those affected were along the route of one milk dealer, who procured his milk from thirty-four different dairies. An inspection of each of these dairy farms revealed that all were entirely free from infection save one, in which it was found that there were four persons suffering from typhoid fever.

The typhoid epidemic in Springfield, Mass., a few years ago, was fairly proven to have been due to three cases in one dairyman's home, who supplied two dealers upon whose routes the entire epidemic was found to be situated.

In September of 1903, in the Twenty-first Ward of the City of Philadelphia, there was a decided and heavy increase in typhoid amounting in all to 78 cases of the disease, of which 41, or about 53 per cent., were found to be purchasing milk from one dealer. On visiting the premises of the dealer his place was found clean and tidily kept. There were, however, two cases of typhoid in the house, which were removed to the hospital the following day. The enormous proportion of cases of the disease on this man's route, the existence of typhoid fever in his family, and another fact that cannot be overlooked, viz., a gutter which traversed his shop on the north side was receiving the refuse from an overflowing cesspool which was connected to two houses in which two cases of typhoid fever were being treated at that time, led the authorities to believe that his milk, either by handling or by some other unknown means, had become infected, and was the cause of the epidemic.

Many cases of diphtheria and scarlet fever have been traced in our own cities in this Commonwealth to an infected milk supply. Nevertheless, the data, although voluminous, is not so conclusive as to be quoted satisfactorily.

Every summer, in all large cities, it is usual to expect a large number of cases of cholera infantum, gastro-enteritis, marasmus, etc., of which a large number prove fatal. This increased summer death rate is limited largely to the very young children and to those fed on cow's milk. It also is largely made up of the poorer classes, but the children of the wealthy are by no means free from the disease. The common forms of milk bacteria are ordinarily harmless, but some forms seem to produce toxins in sufficient amounts to produce the above-named diseases.

Bacteriological examination has demonstrated the presence of a bacillus named after the discoverer, Bacillus Enteritidis Sporogenes of Klein, which has been found by several investigators in the intestines of children and adults who have been suffering with diarrhœal conditions, but which has never, as far as I can trace from examining reports, been found in the intestines of healthy people. This bacterium is usually found in sewage and in our polluted water supplies, in some garden soils, after manuring, and is commonly found by bacteriologists in milk. In the *British Medical Journal* of May 12, 1900, Dr. J. Zammit describes a very severe epidemic

of gastro-enteritis which was almost positively proven to have been due to this common form of bacillus.

Having made an effort to prove in what way milk may become a factor in the causation and spread of disease, I wish to digress slightly, and in a few words outline what I consider to be a duty of everyone interested in the public health of communities, and that duty I wish to put plainly before this Society for the purpose of having the members educate their patients and the public in general to the necessity of dealing only with those milk dealers who can certify to the necessary sanitary conditions laid down by our local and State bureaus of health veterinary department, and not allow the uneducated and ignorant dairy farmer or dealer to have a market for his poisoned and infected milk. Further, let every man in his individual locality see that the local bureaus of health who have not been informed to the easy way in which milk may be infected be so informed at once, and see that the milkmen who supply houses wherein there are cases of infectious and contagious diseases are required by law to follow all the regulations now in force in nearly all our large cities, viz., the quarantine of all milk receptacles taken into the house until the termination of the disease, when they must be disinfected by the bureau of health before being allowed to be taken back to the dairy, and other regulations of equal importance.

To those not familiarly acquainted with the work of the bureau of health as carried on in cities of the first and second classes, this work of disinfection, etc., would seem to conflict with the right of the family physician, but this is not the case. A physician is not only given greater protection in the treatment of his case, but at the same time is protecting the general health of the community. Were we not to have strict regulations disease would spread in our large cities to an alarming degree. The physician, instead of being antagonistic, should be glad of the shifting of a large burden of the responsibility from his shoulders to those of the local bureau of health.

TONICS AND STIMULANTS.

EDWARD CRANCH, PH. B., M. D., ERIE.

The sanitarians of the world have long busied themselves on the consideration of habitual aids to natural energy, for which a strong craving has existed in every age and climate known to man.

The average list includes condiments, sweetmeats and carbonated waters with fancy syrups and cordials, coffee, tea and tobacco, with some choice of varieties and substitutes, malt, vinous and spirituous liquors, then the varied line of drug "tonics," many of them extensively used in popular patent medicines, and comprising Phosphorus, Strychnia, Quinine, Cocaine, Morphine, Iron, Cannabis Indica, Damiana, Saw palmetto and many others more or less deadly.

Now what has Homœopathy to offer, and what to say in this field?

Aids to natural energy, either occasional or habitual, will always be demanded as long as we have sickness or injury and their consequent debility, as long as we have evils to plague the conscience, worries or excesses, loss of sleep, errors of diet that pinch or overload the stomach, ambitions for mental, physical or social, excelling of others, or so long as the human race has tasks to lighten and pleasures to enhance.

Adherence to the law of cure will suggest a long list of drugs usually styled depressants, that in small doses will have the desired opposite effect of stimulation such as Agaricus, Gelsemium, various salts of Potash, Opium, Hyoscyamus, Hydrocyanic acid, Sulphuric acid, Picric acid, and others.

In particular, for lassitude following a heated term, use Bryonia, Glonoin and Opium; in the sleepy, "born-tired" feeling that comes from brain-fag, society-fag or worry, think of Agaricus, Onosmodium, Nux moschata, Chelidonium, Lycopodium, Picric acid, Sepia and Silica.

In convalescence, Opium and Nux vomica and others. In nervous prostration of various kinds remember Paraldehyde, Chloroform, Phenacetin, Phosphoric acid, Baptisia, Psorinum, Zinc, Hepar, Aurum, Conium, Kali phosphoricum, Cocculus, Calcarea phosphorica, Physostigma, and others, all in small doses.

These only give a hint of the immense armamentarium at our call, which we can utilize in treating the sick.

Still, with all this, patients will ask again and again, "Now don't you think I ought to have a tonic?"

To satisfy these anxious souls, who would like to have a big bottle of stuff like what they see their neighbors taking, and who will get "Green's Nervura," or "Fellow's Hypophosphites," or somebody's "beef, wine and iron," take them on the sly and laugh you to scorn if you object; to ease their minds, the writer gives one or other of the many concentrated foods upon the market (not to be named here), and retains confidence while satisfying a fad and doing no harm.

More than this, it seems best for the patient, if no strong contra-indications exist, to continue his or her customary tea or coffee or tobacco, or even his ales, wines and liquors, if not used in excess. Otherwise you will often upset the patients more and make them slower in recovery if you disturb their fixed habits than if you let the confirmed habit alone.

Moderate stimulation aids in the assimilation of food, and often furnishes needed food for the nerves themselves, especially in good wines and liquors, yet a false sentiment tries to make the seeking of their abolition the sole test of good politics and good morals.

Careful study of the situation in the Philippines by expert army surgeons, show the value of wines and liquors in the tropics, and proves that those who use without abusing them, enjoy far better health than those who do not. Hence we should oppose the abolition of the army canteen, and the efforts being made to exclude the liquor trade and supply from the Isthmus of Panama.

The recent decision of the United States Government in the matter of the host of alcoholic patent medicines is a step in favor of a legitimate trade in good liquors, and the sooner these are properly protected by the "pure food" laws the better it will be for this and other communities.

POTABLE WATERS: THEIR DIFFERENCES AND OUR CONSEQUENT CHOICE.

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Water is the most widely distributed and abundant substance found in nature, and has the property of disintegrating, dissolving and holding in suspension or solution an infinitely larger number of substances than any other known solvent. For this reason it is always regarded as the usual solvent unless some other one has been specifically mentioned.

When it is remembered that our bodies are seventy per cent. water, and that by far its larger proportion is supplied by the water we drink, the importance of its purity can scarcely be over-estimated.

Much as it might be desired, the absolute purity of the water supply of the individual or of the community is not practically obtainable, wherein the water used for drinking purposes shall be absolutely free from every objectionable ingredient, held either in suspension or in solution, hence the purity of potable water is relative or comparative rather than fixed or absolute.

The highest type of purity of water is found in that which has been distilled, but in the process of distillation it is usual that minute quantities of silica are dissolved by the water from the still when one of glass is used, or of copper when the still is made of that metal. Copper stills have been lined with gold or silver with the effect of producing distilled water of the highest purity, because of the insoluble nature of the last two mentioned metals. Ammonia and some other soluble gases will distill over with water, and thus remain as an impurity unless the first portions of distillate, which will contain the gases, are rejected. Distilled water has a flat taste because of the absence of the gasses found in natural waters.

Some theorists have assumed that distilled water would be unhealthy because of the absence of the mineral salts necessary to our bodies, and which are found in varying quantities in all natural waters, but it would seem that such objection rested upon purely theoretical deductions, since it may be remembered that all edible cereals, vegetables and meats contain far more of these salts than

can be appropriated by our bodies; hence the conclusion is evident that these salts are not necessary in potable water, that they are at least superfluous, and that, therefore, the most desirable potable water is the one, otherwise pure, which contains the minimum of mineral salts.

Natural waters always contain gaseous liquid and solid impurities, varying according to the source whence they are derived, the character of the soil or rocks over which they have flowed or through which they have percolated, and the state of the air at the time.

The purest waters are rain, snow and ice water from mountainous and country districts. The purity of rain water varies with the locality where it falls. Near large cities, where the air is charged with many products of large manufactories, etc., it will contain whatever of these that can be washed from the air. The rain water of large cities has been found to contain from 5½ to 70 parts per million of sulphuric acid, obtained principally from the combustion of coal containing sulphur. Other sulphur compounds are derived from the same source. Rain water also contains more or less dust and organic matter, which it washes out of the air in falling. Nitrates and ammonium salts are found in small quantities derived from decomposing organic matter, and from combustion of coal. Rain water collected from roofs of houses is very much contaminated by both organic and mineral matter washed from the roofs upon which it falls, and is very prone to decomposition of the organic matter. The proportion of oxygen in the air of rain water is about twice as great as that of the atmosphere. Rain water also contains carbon dioxide and nitrogen. Germ life is often found in rain water, and can be destroyed only by boiling, after which it should be filtered. Water that has been boiled has a flat taste because of the consequeunt expulsion of its contained gases. Melted snow furnishes a water even more pure than rain water, especially if collected toward the end of a snow storm.

Ice water varies greatly in purity, according to the purity of the water from which it was obtained. Ice is always purer than the water from which it was formed, and when obtained from clear lakes or rivers it is often the purest of natural waters, owing to the fact that in the crystallization of water, or its freezing, it leaves part of its dissolved solids and gases in the remaining water. This

lessened amount of the usual gases, however, renders ice water somewhat flat to the taste.

Spring and well waters are simply rain water which has been filtered through a more or less thick layer of soil, and the quantity and character of the dissolved matters contained in it will depend upon the nature of the soil and rock through which it percolates or over which it flows. In large cities, where the soil is saturated with filth, the well waters are dangerously impure, while in well drained and mountainous country districts they are much purer. Dangerous organic contamination may filter through many feet of soil and poison the water of distant wells or springs. Shallow wells usually contain much more organic and less mineral matter than deep wells, and are therefore more likely to contain unwholesome or dangerous matters. Water which has filtered from a cesspool or a privy vault through an insufficient amount of soil is often or usually bright, clear, sparkling and palatable, even when disgustingly impure and disease laden. Deep wells are those which draw their water supply from below a dense layer of clay or impervious rock, and may be regarded as artificial springs, since both are subjected to the same conditions.

Artesian wells are artificial springs formed by boring into the earth, in a low-lying district surrounded by high ground, until a layer of rock or gravel containing water is found, situated between two impermeable layers. The character of such water is determined by the nature of the soil and rocks in which it is found; it is usually free from organic impurities, but is very prone to contain large, even unwholesome, quantities of mineral matters.

Surface waters comprise river, pond and lake water from which the water supply of large cities is usually taken. They consist of spring water and of rain water which has fallen upon a considerable area of country. In agricultural watersheds the erosion by the water materially increases the organic matter, the increase being derived from decaying vegetation. The mineral addition is smaller, as the water remains nearly as soft as rain water. Those waters which drain from cultivated districts contain more organic and mineral matter than that from uncultivated districts, and its character is notably influenced by the fertilizers used upon the land. If the watershed be thickly inhabited, as along the banks of some rivers, the danger of pollution is increased by the refuse and sewage discharged into them. Such water, however, may remain whole-

some as long as it is free from the specific bacteria of disease, though it is liable at any time to become infected by the entrance of bacteria from sewage containing excrement from cases of typhoid fever, dysentery, cholera or diphtheria. The evidence is incontrovertible that impure drinking water may be the cause of these diseases, and that it does so because of the presence of the peculiar germs. In the cholera epidemic of Hamburg, Germany, in 1893, the typhoid fever outbreak of Plymouth, Pa., in 1883, and of Ithaca, N. Y., in 1903, the dejecta of a single patient passing into the water suppply were sufficient to cause an enormous amount of mischief. River water may also be polluted by the refuse of various manufactories along the banks. Hence the immense quantities of water needed to suppply our large and rapidly growing cities has created a problem of increasing moment to devise means of securing an adequate supply of water of a safe or hygienic standard of purity.

A hygienically pure water should be: (1) Clear and limpid; cloudy and muddy waters should be avoided. (2) It should be colorless; a greenish or yellowish color is usually due to vegetable or animal matter in solution, or to organisms, or may be due to argillaceous earths in suspension. (3) It should be odorless, especially free from sulphuretted hydrogen or putrefactive animal matter. (4) It should not be too cold, but should have a temperature of from 8 to 15 degrees C. (46 to 60 degrees F.). (5) It should be palatable, and of an agreeable taste, neither flat, salty nor sweetish. A very limited amount of hardness is not particularly objectionable, and assists the dissolved gases in giving an agreeable taste. It should contain from 25 to 50 c. c. of gases per litre, of which 8 to 10 per cent. is carbon dioxide, and the rest oxygen and nitrogen. One hundred volumes of water will dissolve two volumes of nitrogen, one of oxygen, and one of carbon dioxide. The air of natural waters contains about 50 per cent. more of oxygen than that of the atmosphere. Highly contaminated waters usually contain less oxygen than the above proportion, because it is used in oxidizing the organic matter. (6) It should be as free as possible from dissolved organic matter, especially of animal origin. (7) It should not contain more than 150 parts in 1,000,000 of water of harmless minerals. A minute amount of saline matter is said to be necessary to give it a good taste, but unless of known harmless mineral origin more than 30 or 40 parts of chlorine in 1,000,000

parts of water would indicate urinary contamination. (8) It must be wholly free from lead or other poisons, and from the specific bacteria of disease.

From the foregoing we learn that natural waters are never pure, but are contaminated by various kinds of foreign matter to which they have been exposed. Some of these impurities are harmless to the human organism, and some of them are dangerous in the highest degree. In an analysis of these waters it is the object of the analyst to determine as nearly as possible the nature and amount of impurities found in a water so as to form an opinion as to its healthfulness.

It has been proven beyond a doubt that impure water is a fruitful disseminator of disease, it is believed that the disease produced in such cases is due to microscopic organisms, and that the organic matter of the water simply furnishes a suitable solution in which they may live and grow. It is also known that these organisms grow best in solutions or organic animal matter, and that this animal matter may be the carrier of the disease germs; hence, waters contaminated with animal matters are looked upon as much more dangerous than those contaminated by vegetable matter. If this idea be correct, it is evident that chemical analysis can not detect the disease producing element, although it can tell pure water from impure water. Micro-organisms are best detected by the microscope and by bacteriological examination. The elements usually relied upon in a sanitary examination of water are: The total residue left upon evaporation, the loss in weight of this residue on ignition at a dull red heat (100 degrees C.), the chlorides, nitrites, ammonia, organic carbon and nitrogen, and the quantity of oxygen the water will absorb from an acid solution of potassium permanganate. Poisonous metals should, of course, be looked for if their presence is suspected.

The total residue left on evaporation indicates approximately the amount of solids, but is of no significance unless it reaches more than thirty or forty grains per gallon. This residue will, of course, vary with the hardness of the water, and should be of a pure white color; it should blacken but very little on heating, and should give off no fumes. The residue of bad waters blackens very considerably or gives off the odor of burning horn or of nitrous fumes.

By heating the solids to a dull red heat (100 degrees C.) all volatile and organic matter is expelled, including the water held

by calcium sulphate, some carbon dioxide from carbonates, and oxides of nitrogen from nitrates and nitrites. The residue left after ignition gives a rough idea of the amount of mineral matter present, and the loss on ignition should never reach 50 per cent. of the total residue.

Chlorine in potable waters is very largely derived from the sodium and potassium chlorides of urine and sewage. The average of chlorine in urine is about 500 parts in 100,000; the average found in sewage is about 11½ parts in 100,000; over 5 parts of chlorine in 100,000 may be considered in most cases to be due to pollution of the water by sewage or animal excretions, though the source should always be taken into account in judging of the quality of a water. Vegetable matter may be present in dangerous quantity without its presence being indicated by the chlorine present. Chlorine is estimated by a standard solution of argentic nitrate made by dissolving 4.8022 grm. of crystallized silver nitrate in a litre of water, each c. c. of which will precipitate 0.001 grm. of chlorine.

Hardness of water is caused principally by the acid carbonates and the sulphates of calcium and magnesium; the acid carbonates are decomposed by boiling, and the neutral salts are precipitated. The hardness of water seems to have no very marked effect upon the health of those who use these waters, though it is well known that kidney and bladder diseases are more frequent and severe in limestone districts where the water is highly charged with lime salts. Sodium and potassium carbonates may be used to precipitate permanent hardness and soften the water. Hardness is estimated by means of a standard solution of soap, and for the estimation of both temporary and permanent hardness it is necessary to estimate them separately. For this purpose the total hardness is estimated in one sample, and the permanent hardness in another sample is determined after boiling and separating the temporary hardness.

Nitrates and nitrites are usually looked upon as evidences of former contamination of a water by nitrogenous organic matter, which, if of animal origin in waters containing dissolved oxygen, yields nitrous and nitric acids, which combine witht bases to form salts of these acids. Rain water contains a small quantity of these acids, but a larger quantity indicates that the water is undergoing or has undergone a natural process of purification from animal

matter. This change is partially due to direct oxidation, but more particularly to the action of certain micro-organisms which have the peculiar power of converting nitrogenous organic matter into nitrites and nitrates, both in water and in soil. The process of disposing of nitrogenous organic matter or animal refuse in natural waters is to convert the nitrogen into ammonia, then into nitrous acid, and finally into nitric acid, and the quantity of these compounds found usually indicates the amount of matter thus decomposed. This purifying process proceeds more slowly in river and lake waters than in ground waters, because the exposure is more complete while filtering through the soil than in a body of water. Deep wells may safely contain more nitrates than shallow ones, for the organic matter may all be destroyed by filtering through the soil into a deep well, while in a shallow one some organic matter, germs and spores capable of causing disease may pass undecomposed through a shorter distance. A careful estimation of the nitrates, therefore, gives considerable knowledge of the history of a water, and is regarded as of great importance.

To test for nitrates and nitrites in water: To the suspected water add one-half of its volume of strong, pure sulphuric acid (free from nitric and nitrous acids), then a few drops of a solution of diphenylamin in pure, strong sulphuric acid (also free from nitric and nitrous acids). If nitrates or nitrites are present, a deep blue color will appear at once. To detect the presence of nitrites a solution of metaphenylendiamin in pure sulphuric acid may be used. When nitrites are present the solution assumes a yellow to brown color, according to the quantity present.

Ammonia is first formed by the spontaneous decomposition of organic matter, then nitrites, and finally nitrates. This is so well known as to make an estimation of the ammonia in water a very important part of its sanitary examination. The ammonia is generally spoken of as free ammonia, or more properly ammonium salts, and albuminoid ammonia, or ammonia from organic nitrogen, and should always be quantitatively estimated. This process requires several solutions, some apparatus, and carries us beyond the intended bounds of this paper.

Microscopical examination of many surface waters will easily reveal a variety of micro-organisms, such as daphinæ cyclops, desmids algæ, rotiferæ, amebæ, etc., which feed mostly on suspended organic matter, and are not considered especially harmful.

except in the case of some of the entozoa. Dissolved organic matter in a state of decomposition is generally indicated by bacteria.

Bacteriological examination gives still further information, and is now the ultimate examination of suspected waters.

Purification of water is most thoroughly accomplished by boiling and subsequent filtration. Gross impurities may be removed by sedimentation, suspended impurities by filtration through clay, brick, sand, unsized paper, charcoal, unglazed earthenware or porcelain, porous silicious stone, etc. For filtered water for family use a brick partition, from two to four inches thick, built in a cistern works well, but in time is liable to become foul, and can be cleaned only by rebuilding the partition with new brick. The water is delivered into one apartment, and taken from the other for use. Or a barrel having a shelf near the bottom containing several holes, is nearly filled with alternate layers of gravel, sand and charcoal, through which the water may be filtered, and then drawn from the bottom of the barrel for use. This filtering material gradually becomes foul by use, and should be renewed occasionally. Filters of porous stone and of unglazed porcelain are upon the market, which do rapid and excellent work, and may be purified by thorough boiling. Sand filters are most efficient for filtering large quantities of water for the supply of manufactories and of large cities. Experiments have shown that a sand filter five feet deep, when the water passes through it at the rate of 2,000,000 gallons per day per acre, will remove 99.98 per cent. of the bacteria contained in the water, and polluted water is rendered almost harmless by such filtration. Typhoid fever and cholera germs are almost completely removed by such filters. Spongy iron filters, made by roasting hematite with coal, are very active in destroying organic matter and putrefactive germs.

Some cities employ the combination of a precipitant of the organic matter and filtration by use of either alum or a ferric salt, but alum is not a desirable agent because of its solubility in the water, and the certainty that it is not all precipitated if used in sufficient amount to be fully effective. In the Anderson system the water is agitated with iron borings in a revolving cylinder for about three or four minutes, which forms a certain amount of ferrous carbonate from the carbonic acid of the water. This largely removes the temporary hardness, and on exposure to air the ferrous car-

bonate is oxidized and ferric hydroxide is precipitated, after which the water is filtered.

From the foregoing it would appear that because we use natural waters we must not expect absolute purity in our drinking water, and in our choice of potable water we should choose one containing the minimum of mineral matter, rejecting all water containing more than 150 parts of mineral matter in one million parts of water and that all suspected water should first be boiled and subsequently filtered. For personal and domestic or household use many excellent porous stone and unglazed earthenware or unglazed porcelain filters may easily be obtained, which may easily be purified by thorough boiling. Large quantities of water should be filtered through thick layers of sand, and the sand renewed at intervals.

INSTITUTING AND MAINTAINING THE QUARANTINE.

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It is our desire, in presenting this paper, to call attention to some of the difficulties that have arisen in the practice of medicine, which prevent the instituting and the carrying out of an efficient quarantine. We shall not undertake any consideration of the subject of maritime sanitation—the management of the present day seaport quarantine—which in all its details is a very extensive, interesting and important subject. Especially important is it at the present time because of the existence in various quarters of cases of yellow fever.

The term "quarantine" has its origin from the Italian *quaranta* (forty), because forty days was the length of time disease-infected vessels were kept under observation in the 15th century. This branch of sanitary science, which has for its object the prevention of epidemic disease, dates back, therefore, five centuries.

At the present time the means which are employed by the boards of health in various cities, towns and townships of the Commonwealth to restrict communicable disease interest us, first, because every physician of the State is required by law to report forthwith any and every case of contagious disease discovered to the board of health which has authority to act in that particular community in which the physician practices. Secondly, the health authorities and

our clients also expect us to put into immediate operation such sanitary measures, when we discover exotic disease, as will protect others living in the same or in adjoining houses. That there is room for improvement in the management of the quarantine is shown by the fact that in one of our large cities there were reported 10,127 cases of transmissible disease from December 3, 1904, to June 3, 1905.

The members of the profession, as conservators of the health of the public, must see to it that the sanitary condition of every community is satisfactory. They should also assist the board of health in attending to the matter of quarantine in a scientific manner. This will be the case if the board is presided over and its working directed by a conscientious physician to whom, not only the other members of the board and subordinates, but also the general public should go for information concerning communicable diseases, their recognition, prevention and management, and by whom such information should be sent to those who will not come in for it in order that all may know the dangers of communicable disease and how to prevent its dissemination.

It is surprising to note how little, even educated people know about sanitary science, and how much ignorance and superstition is shown by them in caring for the sick. All classes refuse to give their support to those prophylactic measures that are advised, if such measures require isolation and segregation, because they do not appreciate the importance of the quarantine. But our efforts and those of the board of health, will be without avail unless the public assist us. Most people understand enough about isolation, however, to complain if their neighbors are not shut in. In this connection it is strange to note that those who are the first to complain about laxity of quarantine are also the first to resist such measures when their turn comes to stay in the house. Our human nature sometimes makes us selfish.

In instituting a quarantine in accordance with the law, we encounter numerous difficulties; for example, the physician often has the inclination to shield and protect particular classes of people, namely, those who are influential, in society or politics, or successful in business, people whose accounts are never overdue, and whose good will it is desirable to retain at all hazards. Great firmness of character is required to resist the entreaties of those members of a family into which disease has come, who desire to escape the confinement and inconvenience of the quarantine period, and

insist that retention is useless, segregation criminal, and the quarantine a farce. At such times the best thing to do is to call attention to the Golden Rule, and convince them that its precept should apply to them as well as to their neighbors.

A case of scarlet fever developed in the family of a gentleman who is prominent in business circles, a local politician and an influential member of numerous secret and fraternal societies. When the diagnosis was made known, objection to quarantine was promptly entered; the good wife and other members of the family saying that it would be awful to be shut in for forty days, and that it must not be. They promised to isolate the patient, to keep all the children out of the house, to sterilize the clothing, and to fumigate the house if the quarantine were not placed, for they were sure that it could do no more than that. The head of the family tried, in various ways, to arrange with the board of health to keep the card off the residence; the chairman of the sanitary committee, the councilman and other politicians were seen, and all the arguments to be thought of were advanced to either disprove the diagnosis or to prevail upon the physician to hold back the notification card.

There are times as already noted, when your diagnosis will be questioned to the extent that non-confirmatory statements will be sought—usually also in an underhand manner—of another physician, who, I am sorry to say, is too often ready to give such statement. His motive may not be as bad as it appears, but to say the best, he shows very poor judgment. Such interference prevents the proper maintenance of the quarantine in many cases because the second diagnosis is not very often the correct one.

Several years ago a physician was called upon to see a boy, eleven years old who had sore throat, fever, glandular nodules at the angles of the jaw, tonsils covered with membrane, and a history of illness of several days' duration. There were cases of diphtheria in the neighborhood at the time. The doctor, of course, gave diagnosis of diphtheria, directing the mother to isolate the patient, and told her how to prepare the room, and also how to disinfect the excretions and clothing in order to prevent contagion. The board of health was then notified of the existence of the case. The house was placarded immediately. The attending physician was surprised, when he called the next morning, to be refused admittance. The boy's mother told him that they did not wish to retain him because they had sent for their old physician the previous evening, and

that he said the case was simply tonsillitis, and proposed removing the quarantine. She said, also, that Dr. A. called in as consultant Dr. B. (who is a ward politician) to confirm his diagnosis. The physician who diagnosed the case as diphtheria, a young Homœopathist, was beginning in practice. Dr. A., an allopath, wanted to place him in an embarrassing position and, it seems, called in Dr. B., because of his political pull, to back him up in case of trouble with the health board.

Last week a well known old school physician of our city had a quarantine placed to isolate a case of scarlet fever. The members of the family were dissatisfied with his diagnosis; they, therefore, sent a message to a physician who lives in a distant city, their former home, to come at once. He had been their medical adviser while they lived in the city in which he resided, and they expected him to favor them and remove the quarantine. He came, but probably did not know the circumstances previous to his arrival. Once in the difficulty, however, he tried to please everybody by saying the case was really scarlet fever, but in a very mild form. I do not know what the physician who was first called in thought, but it is evident that this family, thinking that it would be to their advantage to do so, and reinforced by the latter diagnosis, would ignore the quarantine. The milder cases are just as dangerous with respect to contagion as the severer ones, if not more so. If the patient is very seriously ill those who are caring for him will be alarmed and use all sorts of measures to prevent other persons from contracting the disease. But if a given case is a mild one, little is thought of it, and it becomes asource of great danger to the community.

We believe that the law is, in spirit, that all persons suspected of having transmissible disease should be treated as infectious until it is known that they are not. Until that is made the letter of the law, however, we are powerless to properly deal with the matter.

I quote from the *Medical Review of Reviews*, when I read the following statement: "The excesses of zeal in instituting and maintaining the quarantine are so conspicuous and frequent that we are inclined to favor the elimination of the very word from the literature of sanitation as related to the control of contagious and infectious diseases. Modern sanitary science means *everything*, a shot gun quarantine means *nothing* beyond an expression of ignorance tinged with superstition." The editor used the foregoing language

in closing an editorial on *yellow fever and quarantine*. This may be good doctrine concerning yellow fever epidemics, but when they include all infectious and contagious disease, it becomes very poor teaching. Modern sanitary science has discovered much valuable information, a knowledge of which is of inestimable value in preventing the spread of transmissible diseases but the lay public knows nothing about it. The public must, therefore, be educated, then ignorance and superstition will cease to exist, but until then a shot gun quarantine is a necessity. If the health department in one of our large cities had taken the precaution to place an armed guard around the house in which the first case of small-pox developed, to watch every exit, the city would have saved about $20,000.00 in cash, and the heartaches, anxiety and disfigurement of many of her citizens. The first case developed in a small building, which was quarantined but not guarded, and the people came and went, carrying the contagium of the disease and spreading it broadcast. The harvest was an epidemic of more than 200 cases. This result was largely due to the lax quarantine methods and carelessness in sterilization by those who managed the work of the sanitary committee.

There were seventeen places infected with small-pox by importation in New York State in 1901, and in thirteen of them only a single case developed. This speaks well for the shot gun quarantine. The malady must have been recognized promptly by the physicians of each place, and there must have existed a commendable system of co-operation between them and the board of health.

We know of places where there is no co-operation in the matter of quarantine between the physician and the board of health. One doctor will not report scarlet fever cases because he thinks the quarantine unfair. Another says nothing about his case of diphtheria for the same reason, yet he uses antitoxin promptly. A third issues certificates of successful vaccination to school children at the same time that the operation is performed, and still another does not believe in the efficiency of vaccination and lets the patient wash off the virus, or chooses to use sulphur high, and issue a certificate of successful vaccination.

The Harrisburg Sanitary Committee, in the epidemic of last year, had poor co-operation on the part of the public. Facts concerning the history of cases were suppressed and patients were hidden to evade the sanitary hospital. In one instance a patient who had the

eruption well developed was secreted on the third flood of the house when the sanitary officer and the board's special diagnostician called to examine him. Another family permitted one member to go to the sanitary hospital, but when two more cases developed in the home they evaded the officers, and by getting along without the services of a physician, were able to conceal their sick until after they had entirely recovered.

An early diagnosis is all important in this connection, because the exanthematous diseases are contagious very early. In 1898 the spread of small-pox in Western New York was due to a travelling theatrical troupe, among whose members the trouble existed undiscovered until after they had visited twenty localities, in all of which they conducted public parades and performances. As a result of this itinerary the disease was distributed throughout fourteen counties, and three hundred and twenty persons contracted it.

Early diagnosis and early rigid quarantine, we repeat, are important, but early symptoms are not *always* characteristic enough to warrant a prompt and decisive diagnosis until after the exposure of the susceptible has occurred. If the *final* verdict in such questionable cases is in the affirmative, an epidemic is inevitable. Late diagnoses are due to the fact that many of us never had the advantage, as undergraduates, of broad clinical study or bedside demonstrations of the very dangerous and highly communicable diseases, because it is hazardous and often impracticable for the college faculties to impart sufficient clinical knowledge to enable the students to become so thoroughly familiar with these diseases so as to recognize them when they afterward find them in practice. A physician may be in practice some time before he discovers a case of small-pox. The writer did not see a case until seven years after he had been graduated. One of his colleagues was in practice twenty-five years before he met the disease, which was immediately recognized by him. But when an early diagnosis is not possible, it is good practice to allow no one who has a suspicious rash to be at large until a diagnosis of what he has is fully established and until after it is known that there is no danger of contagion.

In some places there is practiced a partial quarantine, *i. e.*, the quarantine is established but numerous inmates may enter and exit at will. This seems to be the worst phase of the methods ordinarily used by the boards of health, and it is no doubt one of the most difficult to control, because if you shut in the wage

earners the income stops at once, and there are very many families who would then have no means of subsistence, and a tight quarantine would be a hardship to them. It would be necessary to provide food, etc., for them, a matter of considerable expense, which is generally refused by boards of health, except in variola. To try to find a way to furnish the necessities of life to those who cannot provide them under these circumstances is a proposition worthy of our consideration, for I believe many precious little lives could be saved if the same radical measures were practiced for all the transmissible diseases that are used for small-pox, or ought to be.

Of the 1,292 cases of infectious diseases reported to the Department of Health of New York during the week ending September 2, 1905, only one was variola with no deaths. There were 122 cases of measles with eleven deaths, 144 cases of diphtheria with thirteen deaths, forty-eight cases of scarlet fever with two deaths, and eighteen cases of cerebro-spinal meningitis with eight deaths. Including typhoid fever and tuberculosis, 202 persons died of preventable diseases in one week in one city, and not one death from small-pox, which disease is feared more by the public than almost any of the others.

About a year ago a family was quarantined because two of the children had scarlet fever. The father was permitted to spend all except his working hours in the house. A boarder was given the same privilege. The mother of the children said she needed some one to run errands, and the representative of the health board, who placed the quarantine card, said another little girl of the household might be permitted to do the errands, but she would better not stop to talk to or play with the children along the way. In a little while a child in the neighborhood died of scarlet fever. The death is not traceable positively to the foregoing cases, but the inference is natural that they may have been the cause of it.

I shall make mention of measles merely to say that because of the serious complications often associated with the disease it should be very much more respected by the profession and feared by the laity. It, too, should be carefully quarantined. There has been an impression abroad, which flourishes yet in some places, that sooner or later children must have this disease, and parents sometimes wilfully expose their children, believing that the sooner they contract it the better. This practice is known to have caused the loss of many lives, and to have destroyed, in other victims, the organs of

hearing. According to some authorities this is the most dangerous disease to which a child under five years of age can be exposed, a disease that causes more deaths than small-pox.

Whether or not a house containing a case of typhoid fever should be quarantined is an open question; but it appears that the old-time dread of contact with an individual having typhoid fever had a reason for its existence, and we are drifting back to that belief In a late report of the military surgeons on this subject the statement is made that only 60 per cent. of the cases of typhoid fever found in military camps can be traced to infected articles of food and drink. The supposition is that the other 40 per cent. of them were due to contact with those who had the fever. In practice we have found two or more cases in one family, and it is true that the one who was last to develop the disease, in many cases, had nothing to do in caring for the first patient. In one instance the diagnosis was overlooked, no prophylactic measures were used, and a second case a lady who was only a sleeping companion of the first and who did not attend to any duties of the nurse, became ill.

Of the 10,127 cases of preventable diseases reported to the health board of Philadelphia during a period of six months ending in June, 1905, 3,589 were typhoid fever cases. The prophylaxis of a disease having so large a mortality rate as typhoid fever has ought to be better understood or more efficiently practiced.

When the title of this paper was chosen, it was the intention of the writer to give some detailed suggestions of disinfectants and disinfection, but these things are so thoroughly understood that it would be superfluous to introduce them here. We have not attempted to exhaust the subject under consideration, but hope that by having called attention to the foregoing facts we have said sufficient to provoke a discussion which will help to protect those who place their lives, so to speak, in the keeping of the medical profession.

CONTAGIONS, INFECTIONS, AND TOXÆMIAS AS FACTORS IN THE CAUSATION OF DISEASE.

W. H. HOLSBERG, M. D., LEBANON.

Contagious and infectious diseases are virtually one and the same thing. It matters not, by way of illustration, whether corn has been planted or whether it sprang up in a vacant lot from the ash dumps. No one would have the presumption to argue that in the latter case it had sprung up spontaneously, there being a certainty that grains of corn were there to germinate. This is precisely the case with these diseases. Roger, at once, places them all under the name of infectious diseases.

There are at least some sixty distinct diseases that have bacteria as their specific individual cause. Pasteur and Bouchard, of the Faculty of Medicine, of Paris, received official sanction that these diseases are caused by bacteria, a living micro-organism, and today it is irrefutably acknowledged as an established fact. An infectious diseases arises, therefore, when a specific micro-organism, having gained an entrance into the body, and having found conditions favorable, grows and multiplies, and in so doing elaborates a chemical poison which has its characteristic toxic effect by the symptoms by which it manifests itself. Thus every germ which causes disease in man does so through its chemical products, a toxic poison is elaborated which is principally carried by the blood to various centers, whose cells take up this toxic poison. Hence disease is the result of impaired or perverted cell action.

Bacteria requiring air for their development are known as aerobic. Those not requiring air are called anaerobic. The greater number of bacteria hold their toxins within their cells, and seem not to give it up readily, but on being diffused through the body by a kind of elective affinity for certain organs or structures there give up their poison, having delivered it in person.

In the laboratory great attention has been given to the microscopical appearance, size and shape of the bacilli. It is more essential from the clinical side that the toxic poison they elaborate should be thoroughly understood. Hahnemann made his provings of drugs on human beings, and so have others since his day. It is highly important that most searching experiments should be made

in determining the merits and uses of antitoxins as specifics against these poisons in man. The blood of man differs from all others so much that if any other than human blood is transfused into man the white corpuscles destroy the cells of the foreign blood, which then become pathological and a menace. Saline solutions or human blood alone will answer.

Certain progress in the development of antitoxin treatment has, however, been made and perfected from experiments on animals.

Diphtheria antitoxin stands at the head of all of them to-day; as a prophylactic, it is *infallible;* as a *cure*, if used *early*, it is equally infallible; but each day's delay makes it less and less efficient, much greater quantities of toxin having been elaborated, requiring much larger doses of antitoxin. Mixed or secondary infection may also complicate the case, and as diphtheria antitoxin is only a specific against its own kind it will be of no use whatever as an antidote to other infections. It is for this reason that physicians having used enormous quantities of antitoxin late in the disease without good results become prejudiced against the use of it at all.

Tetanus is also a disease in which the use of antitoxin is of great value. A punctured wound with foreign matter, as dirt or a splinter, as an irritant is the ideal injury for the development of tetanus, the wound having been forgotten, having closed up owing to its narrowness or scabbing. Right there the toxin is elaborated if tetanus bacilli are present. It is plain that such wounds should be well incised, opened up and thoroughly cleansed, as a surgical measure, and treated antiseptically. The toxin elaborated, should the case develop, has great affinity for the peripheral nerves along the axis cylinder of which it travels from the seat of the injury toward the central nervous system, for which, too, it has a natural elective affinity, as it were. The earlier the symptoms develop the more serious and grave the case will prove to be; after the first week less so, and *still* later the greater number of recoveries occur.

Tetanus bacilli *without* an *irritant*, if injected into man or animal, are inert.

The English authors recommend the injection of antitoxin directly into the brain substance, having first removed a small button from the skull; they also recommend intra-venous injections. Subcutaneous injection they consider too slow a method in a developed case.

All authors teach that the antitoxin should be used *early* as a

prophylactic, thereby preventing any manifestation of the disease.

Hydrophobia is the third disease which can be effectually treated with the antirabic vaccine. The ætiological micro-organism of this disease has not yet been discovered. Like tetanus it has a great affinity for the brain and spinal cord. It invariably follows the bite of an animal having the disease. Here, too, the wound should be laid open, thoroughly cleansed and pressed out as much as possible, and antiseptically treated, *but not cauterized.* The antirabic vaccine cannot be supplied to physicians owing to the fact that it deteriorates within a few hours at ordinary room temperature, but at the Pasteur Institute, of New York, where these patients are treated for the prevention and cure of rabies, the mortality is less than one-half of one per cent.

The rest of the infectious diseases, according to the best information obtainable, cannot be treated with the antitoxins with any better results than with the use of drugs and other means up to this date. Of the three to which I have specially referred, it will be noticed that the antitoxin is of superlative value as a prophylactic or preventive, and it is along these lines that the others will likely find their sphere of usefulness when ultimately perfected.

By no means of less importance are *ptomaines,* another class of toxins elaborated by the action of bacteria on nitrogenous matter. They are also known as putrefactive alkaloids. Some of them are highly toxic. These poisons bear a great resemblance to the vegetable alkaloids, both chemically and clinically, in their appearance and behavior, with *this* difference, it is well to bear in mind that they always require a stage of incubation before their action becomes manifest; such is also the case with infectious diseases, while *drugs* begin their action at once.

Tainted meats, spoiled sausage, spoiled ice cream, fish, lobster, cheese, canned goods of many kinds contain ptomaine poisons and produce in the patient serious symptoms of a toxic nature, such as vomiting, diarrhœa, depression of the heart's action, paralysis, collapse and death. Lesser degrees of ptomaine poisoning arise from the use of the same foods, when less *seriously* tainted, such as partly turned meats, vegetables, fruits or *warmed up* foods, which had not been preserved by a thorough refrigerating. Such foods partaken of day by day are the cause of a chronic ptomaine poisoning or auto-intoxication; the alimentary canal becoming the sewer of the body, and the intestines a veritable hot bed for the further

development of bacteria, which had already established themselves in these partly decomposed foods. Thus such symptoms as headache, dizziness, distress and sickness of the stomach, cramps, colic, diarrhœa, vomiting and a host of others may be produced. It is important that none but good meats, vegetables and all other foods should be used. The Jewish people have their shochet to look after the slaughtering of all their animals, inspecting the meat, according to special rules handed down from the time of Moses. Deut. 14:21.

The effects of auto-intoxication can be noticed in many a patient if we bear in mind that there is such a thing, and there is no doubt that constant erring in the use of aliments, which are unwholesome, have great bearing on diseases not generally thought to be of bacterial origin, as the action of these toxins, acting insiduously, change and pervert the function and action of the cells of organs and viscera in a vague and obscure manner.

Toxæmia, then, is a great factor in disease, requiring serious attention; suspicious foods should be avoided, and a plan of intestinal antisepsis should be followed with a view of removing as far as possible all putrescent matter from the body, then, with the use of the indicated remedy and all other reasonable means not neglected, our duty, in the main, will have been effectually performed. And now, my coadjutors in the profession, I submit this paper to you, not knowing how nearly you may agree, or how far you may differ with me; hence in so doing, and in conclusion, I will re-echo from the vista of the past the language of Pontius Pilate, "What I have written, I have written."

DISCUSSION.

DR. M. A. WESNER: *"Similia similibus curentur."* This is the law of cure by the great God ordained. What are we, Homœopathists or bastard allopaths? Which are we? Antitoxin may do if we have nothing better. It may do for diphtheria. I have seen it tried for the last ten years, have watched its effects very carefully, and have seen hundreds and hundreds die of it. Our cemetery over at Johnstown is full of children who died from the use of antitoxin, or diphtheria, or both together. It is not infallible by any means. It is a remedy got up by the old school. Of course, if we have nothing better let us say we know nothing of *"Similia simili-*

bus curentur." It is the first time I ever heard it here. In 1893 I lived in Houtzville, Clearfield county. I was the only Homœopath there. We had an epidemic of diphtheria in and around that place. It was malignant diphtheria. Inside of two months I treated sixty-five cases with Homœopathic remedies. Twelve of these were laryngeal diphtheria, what we call diphtheritic croup. I had seven deaths, and used no antitoxin or any other kind of allopathic drugs. I think any Homœopath who watches such cases can get along equally as well. Of course, I believe it is the best remedy the allopaths have, because they had none before they got antitoxin. Serum therapy is a fad of the day. I am not surprised that some of our people are afflicted with it. It is a disease, probably a microbe, I do not know. These microbes are most wonderful things.

Why cannot someone of our members get up a paper on the treatment of diphtheria with the potentized remedies, particularly the high potentials? I have never used antitoxin in my life. I have treated cases successfully right along side by side with other men who used it, and I am positive I have lost no more cases than they have, and not so many in many instances, and for this reason I look upon this as a fault of our people.

Dr. C. W. Bartine: The gentleman who just had the floor has made so many statements in reference to antitoxin which I belive to be absolutely not consistent with the experience of anyone who has used antitoxin that I think they need refutation. In the first place, I believe antitoxin to be Homœopathic. I do not consider it an allopathic drug nor do I consider it in the drug class. I consider it to be Homœopathic in every form, and I believe it works on the Homœopathic principle in fighting the disease. As far as persons forming a judgment about the use of antitoxin when they have never used it, I cannot understand how they know anything about it. I want to say that in the City of Philadelphia antitoxin is used to an enormous extent, and I believe as much by Homœopaths as by allopaths, and I believe that they depend on it as an adjuvant to their Homœopathic remedies. I believe, further, that seventy-five per cent. of them would be afraid to treat cases of diphtheria without it, and I think, all in all, it is one of the wonders of the age. I do not believe it is infallible. I believe there are cases that do not need it, but I cannot see that it can do any harm. It is absolutely a non-poisonous product.

Dr. C. P. Seip: About antitoxin being Homœopathic, if it were

a pure diphtheritic body it might be Homœopathic, but it is a combination. I do not know what kind of antitoxin they use in Philadelphia, but that we use in Pittsburg contains a considerable percentage of carbolic acid. In giving such drugs, for instance, as tuberculinum and antitoxin I read a statement that was made by two eminent physicians in Europe, stating that tuberculinum was one of the greatest remedies to-day in existence for the treatment of tubercular trouble, and that it was strictly Homœopathic. These were two eminent allopathic authorities. I believe they were both Italians. When it comes from such eminent sources as teachers in the universities of Europe, who admit the fact of the Homœopathy of tuberculinum and antitoxin for the treatment of those diseases that carry off millions of people, where does Homœopathy stand? It stands right at the head of the table. They are the two drugs, curing cases every day all through Europe, used successfully now, especially tuberculinum. I think Homœopathy has gained a point from the fact that our opponents admit it is Homœopathy.

Dr. M. A. Wesner: I would suggest that the member who said antitoxin is Homœopathic be appointed one of the provers to prove antitoxin. It has never been proven. We do not know anything about it. Let him prove it, and meet the organization next year, and show it is Homœopathic, and I will be satisfied.

Dr. Z. T. Miller: With regard to the Homœopathicity of antitoxin, I believe it to be a dangerous thing for a Homœopathic society to declare that antitoxin is Homœopathic, because if that was noised around, and the old school get hold of it, they would discard it at once, and would not have anything to do with it. I do not see how it can be called Homœopathic because it has never been proven. It is never applied, as far as I know, according to any rules that govern the application of the remedy in the treatment of disease, according to the law of similia. I have seen a little of the use of antitoxin, and have seen a number of cases die after antitoxin had been used. One of the most pitiable cases I ever witnessed in my life was a case where I succeeded an old school physician who had the assurance of the board of health of our city that he was treating a case of diphtheria. When I went up to the house I saw a sign "scarlet fever here." I went in. The child was comatose. It had been taking medicine every fifteen or twenty minutes, and had had eighteen bottles of antitoxin squirted into its back, and had pretty near that many ulcers up and down the back.

If antitoxin is not a poison, what caused the ulcers on that child's back? I told the parties that the child would die, and it died. Who is to be relied upon? The board of health said the man had a case of diphtheria, but the man himself decided he had a case of scarlet fever, and he put a sign out. Notwithstanding that, the board of health in the City of Pittsburg told that man he had a case of diphtheria, and he squirted eighteen bottles of antitoxin into that child. It died a miserable death.

Dr. J. D. Keller: If antitoxin is to be added to the list of Homœopathic remedies, let morphine be called Homœopathic, too, because it relieves pain when you give enough.

Dr. M. J. Locke: I have used antitoxin freely, and where I have gotten my case early and used plenty of it I have had most excellent results, and I have the first ulcer to see from its use. I feel like saying I think those ulcers were due to dirty needles.

SALT, A PILLAR OF ANTISEPTICS.

D. W. STRAUB, M. D., BETHLEHEM.

The time for argument and controversy as to the benefits of asepsis and antisepsis is about, or should be about, past; very few laggards are left who deny the utmost value of these methods.

That suppuration, erysipelas, pyæmia and similar dangers arise from pyogenic organisms is now fully agreed upon, and in this era of bacteria, germs and cocci we all claim progress. The surgeon, the gynæcologist, the obstetrician and the general practitioner, all share in the belief that in comparison with prelisterian days we have made great strides of advancement, and that in septic diseases (which twenty or thirty years ago were rife in private and hospital practice and slew thousands), such conditions have been brought about that we need dread them very little, and the mortality rate has dropped nearly to naught.

Of antiseptic drugs there are legions, many so-called and many real, most wholesale drug houses and manufacturing chemists advertising and sampling one or more for which they claim special merit, and most practicians have their favorites and vary them according to the case in hand.

We will pass them all by and try to make out a case for *salt*, our

Natrum mur.: the Chloride of sodium, which exists in all nature and the most abundant of all native soluble salts in existence, a most important factor in assimilation and nutrition.

Salt that preserved meat, fish, butter, eggs and the food of our ancestors long before we found out that minute germs and bacteria in countless numbers were daily having a frolic all over us, and nightly carousing or sleeping among and all over our provender. Yea, many years before the father of asepsis and antiseptics was born.

We have always used salt as a condiment and cooked with it. It is an important constituent of our make up, solids and fluids.

It is, therefore, the oldest, the most universally employed, and probably one of the best antiseptics we posses, and the oldest and greatest germicide the world ever knew.

In *solution* and externally applied (as in the bath) it is a stimulant and astringent, a tonic and excitant: in depraved conditions of the system, and in many diseases of the skin acts most beneficially. It will abort suppuration and induce healthy action, kill disease germs and drive out or kill vermin.

In making local applications of salt solutions the strength of the solution should vary according to the diseased condition and location of the affliction *i. e.*, in sore and inflamed eyes or eyelids, the weaker solutions: in diphtheria and sore throats and in phagedenic deposits, the stronger solution; wounds, chronic ulcers, wash frequently or pack with salt. As injections for vesical catarrh and offensive urine, weak solutions warm. In offensive lochia, vaginal or rectal discharges, and in seat worms, use the warm solutions medium. In putrefactive fermentations of food in the stomach with evolutions of offensive gas, use cold water, and one-half to one teaspoonful of salt to a glass of water to be taken before or soon after meals.

Normal salt solutions, either per rectum or hypodermically injected, are frequently indicated, and of late years have been often employed in cases of sudden collapse. It has been of undoubted benefit in paresis of the heart muscle from any acute disease, in acute gastro-enteritis, in great weakness from loss of fluids, severe vomiting and diarrhœa, hæmorrhages from the lungs, bowels or stomach, and in heart failure, in chronic diseases and cachectic conditions.

Internally, Natrum mur. promotes the activity of tissue changes

and increases the excretion of urea, hence its use and value in chronic scrofulous ailments affecting the glands, the liver, the bowels, the spleen and the skin. It also acts upon the blood, the lymphatic system and the mucous membranes, causing deterioration of the vital fluids and giving rise to inflammation and ulceration and producing distinct dyscrasia.

It also produces and cures cachexia like that resulting from malaria plus quinine, malnutrition and emaciation and anæmia, the latter probably due to its depleting effect upon the whole system.

Chills and Fever. In inveterate, long lasting and badly treated cases of intermittent fever, with chill commencing about 10 or 11 A. M., Natrum mur. has probably achieved its greatest victories homœopathically. In constipation certain forms of summer complaint, ophthalmia, catarrh, dyspepsia, enlargement of the liver and spleen, in gonorrhœa, leucorrhœa and in chlorosis, it is frequently indicated.

Homœopathic Data. Said to have been first proved by Hahnemann, and appears in volume IV. of Chronic Diseases, also been reproved some years ago by the American Society of Provers, Schussler, in the "Twelve Tissue Remedies," recommends the twelfth potency. The grand characteristic of the drug all through seems to be a *serous discharge*, a watery, transparent, frothy mucous. It is useful in catarrh of all mucous membranes (with these characteristics), locally and internally, in vesicles of the skin or mucous membranes, with watery contents, which burst and leave a thin scurf. Catarrhs and coryza with salty taste or loss of smell and taste, redness of the nose with pimples or vesicles.

Face. The face is sallow, patient looks bloodless, the tongue has a shiny coating with bubbles of frothy saliva covering the sides, vesicles on the tip of the tongue, the dryness of the tongue and throat being more a sensation than a fact. The teeth are sensitive and bleed easily, the uvula and throat are relaxed, and the chronic soar throat has a feeling of a plug or lump in it with a feeling of great dryness.

Gastric Symptoms. Among the prominent gastric symptoms are water brash, longing for bitter and salty things, violent thirst and hunger, jaundice, drowsiness, pain and salivation.

Bowels. Although moisture and a serous, watery discharge is the most prominent characteristic of Natrum mur., we do find a condition of dryness in some places, even though there be moisture

in others, *i. e.*, in constipation there is dryness of the mucous membranes, the mucous lining of the rectum and the stools are dry, producing fissure, torn, bleeding, smarting feeling after the hard, dry, difficult, crumbling stool.

The diarrhœa is excoriating, watery and often involuntary.

In lumbago and backache the patient is relieved by lying upon a pillow or something firm.

Skin. Natrum mur. is often indicated in chronic skin diseases, urticaria or miliary eruptions, eczema, fine scaly eruptions, or eruptions with watery contents, and is an elegant local application in blisters, blebs and watery vesicles and in ivy poisoning.

Heart. The pulse is rapid and intermittent, and felt all over the body, especially in the epigastrium.

In hyperæmic and scorbutic conditions, cold hands and numb extremities.

The lips are thick, and there are blisters like pearls about the mouth and chin.

Head. The headache is worse in the morning and hammering. The scalp is full of dandruff, and there is an itching eruption on the margin of the hair at the nape of the neck. The latter symptom is also found under Petroleum, and frequently cured by it.

Mentally. Mentally the patient is dejected and hopeless, consultation aggravates a hypochrondriacal mood with angry, possionate outbursts. It is, therefore, the remedy par excellence for cranks. As a Homœopathic remedy it compares with Calc. carb., Graphites, Alum, Lycop., Sulphur, Zinc, Sepia and Mercurius.

Is antidote to Nitrate of silver and Quinine, and since it melts the ice off your office steps in winter helps to freeze your ice cream in summer, is a most valuable condiment, preservative, antiseptic, astringent and stimulant the year round, a factor of the whole earth and all there's in it. It should often be thought of

Finally, as we think of salt, let us not forget "rock salt" and also the rock upon which the foundation of Homœopathy is built and has rested grown and flourished for years, until at the present time we have become numerous (and ornamental), and if some of us have been trying "short cuts" and become first class eclectics, or worse, there is time yet for us to start in at bed rock, the foundation; study fundamental principles and select our remedies according to the law of Similars and strict individualization. Then will we find, if the indications are right, that Natrum mur. will not disappoint us.

THE EFFECT OF THE SANITARY CONDITION OF SCHOOLS ON THE HEALTH OF CHILDREN.

R. S. SUMMERS, M. D., PHILADELPHIA.

"The Effect of Sanitary Condition of Schools on the Health of Children" is the title that I gave the Chairman of this Section, but on thinking it over I find I have to include the home environment with it, as a great many of the diseases that are transmitted from scholar to scholar are contracted at home.

As an example last spring there was a family in my neighborhood (not a patient of mine, though) that had measles. Two of the children went to one school, while an older boy attended another school. The sister of the patient was kept home, but the boy kept at school, with the result that there were a couple of boys sitting close to the boy that contracted the disease, showing that the school is not to blame for all the diseases that develop among the scholars.

We all remember in our own school days the fact that we hung our coats and hats on hooks, sometimes two or three on a hook, with the result of our mothers' frequently having to rake our heads for vermin. To-day the schools are a little better equipped in that respect, as they have larger ante-rooms with more hooks, and frequently the children keep their hats with them at the desk, while in the higher grades they have lockers; and in some of the very newest buildings the lockers are so arranged that they can be flushed and thoroughly cleansed, which is done once a week.

Another bad thing is the fact that the children on going to school get their feet wet. There is no opportunity of changing their shoes and stockings, so they sit with these wet, cold ones on all day, with the result that they have acute catarrhal colds of head, bronchitis, and at times pneumonia, etc., and all of them being to a certain extent contagious, the parents leaving the children continue at school the others contract the disease.

The drinking cup is another bad factor. Where there are a couple hundred or more scholars, with possibly one or two cups, they could hardly help passing along different diseases. It is the same at any public drinking fountain. At times these drinking

places at the school are close to the water closets, but the health boards are watching these matters closer to-day than formerly.

The water closets themselves are often a source of disease. Built of wood, at times covered with zinc, which, as you know, soon corrodes through, with the result that the trough becomes a hotbed for the growth of germs. The floor of wood is generally wet and dirty, not only from the leaking of the trough but urine. The children walking over it these germs stick to shoes and are carried into the school room, where they dry, and the shuffling of feet stirs it up and the resultant consequences are injurious. And often these closets out in the yards during the cold weather freeze, with the result that the troughs and closets are not flushed, and, if cold, girls and young children will not use them. Result, constipation and retention of urine.

Often the building in which the latrines and closets are situated are small with very little ventilation, and even at times in the basement of schools. Now, the air in small rooms is unhealthy for breathing, and when in the basement, this foul air will pass up through the building.

In the thickly settled portion of cities the schools are connected with the sewer system but in outlying districts they have the cesspool, which frequently is improperly built.

The school room frequently is over-crowded, low ceiling, insufficient light and very poorly ventilated. The desks are generally too high for the small children and too low for larger ones, and it seems inevitable that even in a room having graded height desks that the children will be reversed as to desks with the resultant twisting and deforming of the spinal column. The light coming, as it does frequently, directly back of pupils and consequently throwing a shadow over their work, which gives work for our friends the oculists and opticians; and at times I have been in a school where there was a large window in the front of the room, and on a bright day it was almost impossible to see what was written on the blackboard, and the teacher expected us to see it, and if we made any mistake we were punished, so consequently there was the eye strain, while other parts of the room were so dark that especially on a cloudy day we could hardly see what was printed in the books.

The books are carried home and there laid on the floor and often in the street, going and coming, so that they are filled with germs

of all kinds, and the odor of cooking and a little of everything about the house; and, as we all know, a large percentage of these homes are not as clean as they might be. These books are then opened and shut—and at times very forcibly—with the result that the germs are sent sailing through the school room for the scholars to breathe in.

There generally is an abundant supply of heat, often a superabundance, and no outlet for foul air, or at least not sufficient outlet, this causing headaches and lassitude. Then they throw open the windows, with the result that the cold air blows directly over the children.

Then take the lunch they carry or are able to buy at or near the schools. As a rule, it is tough, cheap baking (such as some of the cranberry tarts, etc., that we used to get from the old man and his baskets in hall at college), which they eat hurriedly so as to have more time for play in their oftentimes small, inadequate, damp, sunless play grounds, resulting in dyspepsia and its accompanying ills.

The long hours of the scholar have a bad effect, often more than the amount of work they have to do, and is the cause of neurasthenia and complete breakdown. A child entering primary school at the age of five or six years is kept three hours in the morning and two or two and a half in the afternoon, with a break of an hour or an hour and a half at noon.

Edwin Chadwich has furnished us with data covering this point. He states that a child from five to seven years old is able to attend to one subject for about fifteen minutes, which should be the length of a lesson; from seven to ten years, about twenty minutes; from ten to twelve years, about thirty minutes. The time spent over this and length of time spent in school is exhausting, and tends to form habits of inattention, and health must suffer. Then taking the higher grades, particularly of young girls of fourteen to eighteen in the normal schools, running up and down stairs, from one lecture or recitation room to another, while the exercise is beneficial to a certain extent, as it is a slight relaxation for mind and body, is really bad for the heart; but though the girls are kept at a steady grind for the five or six hours at school as soon as they get home they must sit down and peg away at their work for next day, often necessitating their sitting up until a late hour at night, and often getting up early in the morning to finish; is it any wonder

that so many of our young ladies of to-day are pale weaklings? The boys are apparently tougher, and can stand this better or are possibly a little more indifferent to results, so that it does not affect them to the same extent. Of course, we can not blame all of this to the schools or lessons, but so many of the parents and children themselves have social duties that keep them on a nervous strain, which combination causes the breakdown.

Backache. This is not the name of a disease, but is used here as designating a class of cases, cases not of spinal disease nor uterine disorder, but overfatigue. This is specially the case with young girls of feeble circulation (evidenced by cold hands and feet), whose enthusiasm for work is in excess of their physical power. They rise early, study before breakfast, sit at piano, retire late, take insufficient or non-nutritious food, and still further exhaust themselves by irregular and fatiguing exercise, undertaken with the idea of "working off the effect of overstudy." At last comes total breakdown.

I will finish by giving a partial report of the school inspectors of Philadelphia as furnished by the Board of Health for 1904 and from January to July, 1905:

	1904.	1905.
No. of schools assigned	312	1,884
Visits made	28,790	32,494
Pupils sent to Inspector by principal	172,101	29,424
Individual examinations	774 188	93,860
Pupils excluded	11,317	4,508
Boys	5,215	2,178
Girls	6,102	2,330
Recommended for treatment		14,656

The diseases for which pupils were excluded and the number of each would make a report that would be tiresome to hear, but includes typhoid fever, diphtheria, scarlet fever, measles, varicella, pertussis, skin diseases, and a great number of others that are all contagious or infectious.

These reports only take in the lower grades up to and including the grammar school. The high schools, normal schools and manual training schools are not included.

I will not say anything about remedying these evils, but let you draw your own inferences, and let some of those who may discuss this point out the remedy.

REGIME.

R. E. TOMLIN, M. D., PHILADELPHIA.

The rounded world is fair to see,
Nine times folded in mystery;
Though baffled seers cannot impart
The secret of its laboring heart,
Throb thine with nature's throbbing breast,
And all is clear from East to West.

—*Emerson.*

Regime is the golden rule of human affairs, and the supreme guide of health. It may be placed in three grades to suit the need of men and women who are placed on different elevations in the scale of health. What is good for one may not be so for another. It is the rule of care or conduct intelligently observed. It is respect paid to order, attention and method. Without it nothing succeeds. Chaos is the legitimate fruit of a lack of regime.

The human body is the only system in the world, or in the universe, that has been left to itself, and the penalty that now follows this neglect is seen in the fearful ravages of disease and the consequent loss of health, comfort, happiness and competence.

Man knows very well that he would neglect his garden if he could escape the penalty, but as the punishment is starvation he sees he must keep out the weeds, the insects, the fungus growth and other enemies of the soil. The roots need air, and every weed that is pulled out opens a passage for the air to enter. Pruning, training and shaping of the growth are necessary to save the plant or to bring it to its best yield.

Order, planning and method are everywhere in evidence on the earth, and they are the opposite conditions of chaos. A human being is given to the charge of adults during the first years of life; how badly this duty is fulfilled may be seen from the fact that in every million children that are born five hundred thousand die in infancy. Neglect, or ignorance, or unwillingness to learn of regime are the causes, and the penalty is borne by the innocent babes. It is safe to say if these infants were colts or calves, from which man was compelled to earn his income, he would find a way

to save most of them. Why? Because in rearing stock a regime or system is necessary and always adopted.

Are human offspring less valuable than colts and calves? He knows what and how much his horses eat daily, and he knows that they must have certain exercise, fresh air, grooming, etc., etc., to keep up their health. Of his children he has little thought except to keep them well supplied with medicines and doctors. Why is the owner of valuable stock more careful of it than of his own household? The answer is plain. If the valued animal becomes weak and sickly through lack of regime the money value is at once reduced or lost; but if the children, having to endure neglect of the very kind that would injure or destroy a good horse and become weak and sickly, they bring no money loss to the family unless actual illness ensues. Then, when the penalty has come, the fight for health and life begins, and the cost becomes apparent, often sadly.

There has never been a human being on the earth, and there never will be one who can defy regime and not pay the penalty. Order and intelligence are as necessary in the plan of living as they are in the care of a garden and the protection of a valuable animal.

Unfortunately most people do not consider that there is always a penalty for failing to adopt regime. The great number of doctors, druggists, hospitals, asylums, sanitariums, patent medicines, nurses and charitable institutions all attest to the truth we have been considering. When will physicians realize the necessity of more insistent attention to this subject? When will the people awaken to the enormity of the penalty of this sin?

How many are lost by the weakening of the vitality and the consequent inability to earn a well man's salary? How many are lost by enforced idleness, and by poor judgment and feeble brain activities? How much of the wealth that properly belongs in the home for the care and training of the children has been sacrificed on the altar of attempted cures, all of which might have been saved and prevented by regime: multiplying of diseases, increase of suffering, shattering of minds, etc., etc.

The healthy mind will search for truth as for hid treasure, search until it find the key to the complicated lock. The architect who embodies his thought in temple or tower only reproduces himself, in thought forms the beautiful and the true, and he must be judged by the product of his own genius. To judge of an architectural

monument the critic must have correct perspective. Form, light, shade and color have fixed laws, the laws of optics are strictly mathematical, hence they are immutable and not subject to the notions of the critics; but while truth is many-sided, there is only one point of perspective where the whole is seen from the standpoint of the artist. To reach this position requires at least two things, a desire to know the truth and a surrender of all prejudices and self-conceit. Some long established dogma, or pet creed, educational bent of mind may cause such mental aberration that the unchangeable law will seem to make the long short, the straight crooked, or the worse to appear the better reason. Truth is often mistaken for error and vice versa. Mind mad with error attacks the truth like a wounded bear in defense of her cubs. Ignorance and prejudice carry their own two-feet rule by which they measure truth and mind.

It requires more moral courage to defend the truth in the face of the multitude than to spike an enemy's battery. Mind giving expression to truth is always divinely supported; truth cannot be conquered; it may be taken prisoner and shut up in a dungeon for a while, but release will come, and it will at last triumph, "The immortal years of God are hers." The heliocentric system was a philosophic truth long before Descartes made his demonstration. Truth is none the less true because the majority neglect or reject it. The multitude may mob Galileo, the priests may threaten, but the world moves on, just as the moon does, though the dogs continue to bark at it. What can we know of the parts of a temple till the superstructure is completed and the top-stone is finished? There are single stars which have more attractive force than all the known matter in the universe could account for. Sirius and Vega and other stars are white with the inconceivable velocity at which they are moving through space. Job names this group Chimah, a beautiful Chaldaic word, which is the divine key to the influence of these stars upon the earth. The word means pivot or axle, the central point of turning.

It is now an astronomical fact, demonstrated by a series of independent calculations, confirming the revelation of Job, and the poetic insight of the Greeks, that Alcyone the brightest star in the group Pleiades, is the great centre or axle around which our earth is revolving. M. Maedler has mathematically demonstrated Alcyone to be the luminous hinge in the heavens, on which is turning

the solar system. Earth and all her sister planets are moving with a velocity of four hundred and twenty-two thousand miles a day in an orbit it will require ages to complete. Man has travelled through space since the days of Eden, and yet he is still among the stars that Adam saw, for we have not moved through one second of the great arc of the solar system since our world began. Yet Alcyone is not the centre of the universe of worlds. The analysis of the light from these more distant worlds proves that they all belong to one great system. Prof. Darwin, son of the great naturalist, confessed in his annual address as President of the British Association for the Advancement of Science, recently: We have seen that it is possible to trace the solar system back to a primitive nebula with some degree of confidence; but such primitive nebulæ stand in as much need of explanation as their stellar offspring. Man is but a microscopic being, relatively, to astronomical space, and he lives on a puny planet circling around a star of inferior rank.

Does it not seem as futile, then, to imagine that he can discover the origin and tendency of the universe as to expect a house-fly to instruct us as to the theory of the motions of the planets? And yet so long as he shall last he will pursue his search, and will no doubt discover many wonderful things which are now hidden. We may be amazed, indeed, at all that man has been able to find out, but the immeasurable magnitude of the undiscovered will throughout all time remain to humble his pride. Our children's children will still be gazing and marvelling at the starry heavens, but the riddle will never be read. We have here admissions by the greatest men of our day, illustrations of the thought of the writer. Everywhere in science we have evidence of the wisdom and necesisty of regime, of order, attention and method.

The four cardinal enemies of health are: 1. Relish; 2, custom; 3. convenience; 4. indifference. The enemies of health are the primary causes of ill health. Disease is like the escape of the horse from the stable; cures are like the hunt for it after the escape; regime is the forethought that made the escape impossible.

Relish is the agreeable taste of food and liquid that comes in contact or passes the palate. It is located solely in the mouth, and is not in any way connected with the stomach except as an inviting influence. There is no subject of common interest in which so many errors are made in the public mind as in this alone. There is a wi lespread belief that relish is necessary for the nutritial value

of food, but there is not the slightest foundation, in fact, for this belief.

The taste for any food or drink that is pleasing or inviting is a relish. Children have a relish for bitter and disagreeable medicines if covered with sugar, and the sugar is all that touches the mouth. Physicians have always had great difficulty in curbing the taste of patients for vicious foods, such as will in a majority of instances aggravate existing illness or produce death.

Custom includes style, fashion or prevailing methods, and applies to all departments of life. It is not by any means easy to change fixed habits of life even though they be known to be decidedly wrong.

Convenience. It is an agreed state of things that the well known laws of health are not given attention in the home because of the convenience of conditions that favor their neglect. The conveniences of life are the details that make less work and bring more comfort. This is proper. The great burden of life is not the fault of nature or of the Creator but of the human race itself. They seek conveniences, but only when they can be had at their own convenience.

Indifference. Every species of creation has its prevailing trait of character, and indifference is that particular trait which most denotes the human mind. It is not to be charged as a fault as it is inborn and inherent. No one acquires indifference, it is sometimes overcome by a high grade of development; but it fixes itself upon all classes regardless of education or mental power. There are a few motives in life that operate against the display of indifference. One is the motive for appetite; another for pleasure; another for gain; another may be said to be the motive for passion. When these are strong in their influence over the human mind the trait of indifference generally bends and yields, but the motive for health, for long life, for success, for safety against disaster, and for moral gain will never outrank the trait of indifference, except in the few cases where the man or woman has a keen intuition of the coming dangers.

High regime is a plan of living that aims at high ideals or the best laws of health.

Middle regime is a plan of living suited to people who are unwilling to obey the strict demands of nature, but who will comply with many of the easier rules of conduct.

Low regime is a plan of living that is suited to people who prefer to let the health take care of itself, but who are willing to apply a few of the doctrines of common sense to their habits of daily life.

High regime is curative.

Middle regime leads to improved health.

Low regime keeps the health stationary.

High regime is for persons who are weak.

Middle regime for those in fair health.

Low regime for those in robust health.

Of necessity this paper is only suggestive, and has but touched upon the threshold of a vastly important subject to us all. I have thus far commented on the value of regime in everyday life, and the deliciousness of health when so doing as well as the penalty and folly of regarding it ruthlessly. The deadliest foe to a man's longevity is an unnatural and unreasonable excitement. Every person is born with a certain stock of vitality, which may be husbanded or expanded rapidly as is deemed best. He who lives abstemiously, who avoids all stimulants, indulges no exhausting passions, feeds his mind and heart on no exciting material, lets nothing ruffle his temper, keeps his accounts with God and man duly squared, is sure, barring accidents, to attain to life's longest limit, and live serenely the while.

REPORT OF THE

SECTION OF HOMŒOPATHIC INSTITUTES AND CLINICAL MEDICINE.

Clinical Cases, by W. G. Dietz, M. D.
The Status of the Consumptive, by F. W. Boyer, M. D.
Scarlatina, by Edward Cranch, M. D
Some Things To Be Considered, by C. S. Kinney, M. D
Concerning the Treatment of Cerebro-spinal Meningitis, by W. J. Martin, M. D.
Hypnotism (?) and Homœopathy, by Z. T. Miller, M. D.
Homœopathy in Chronic Diseases, by C. M. Richards, M. D.
The Modern vs. the "Old-fashioned" Methods in the Diagnosis of Phthisis Pulmonalis, by E. R. Snader, M. D.
Report of a Case of Suspected Tubercular Peritonitis Terminating in Recovery, by Anna D. Varner, M. D

CLINICAL CASES.

WM. G. DIETZ, M. D., HAZLETON.

Will you permit me, as Chairman of the Bureau of Clinical Medicine of this Society, to say a few words pertaining to it, though not in keeping with the title of my paper.

While clinical medicine, in general, brings into use all the knowledge available in the treatment of the sick, yet, in its more restricted sense, it has for its object the demonstration of therapeutic methods at the bedside. Homœopathy as a distinct school of medicine, is, or becomes only so, through the administration of drugs in disease in accordance with its fundamental principles. These latter are well known to you all, and expressed in what may be called a working rule—Similia Similibus Curantur.

Accepting the correctness of this statement, the Bureau of Clinical Medicine of a medical society, bearing the distinctive title "Homœopathic," has for its purpose the demonstration of the treatment of disease, in accordance with Homœopathic principles. Whatever reason the individual physician may have to resort to means

and methods not in keeping with the tenets of Hahnemann, yet it cannot be gainsaid that our very existence as a distinct school of medicine depends upon the strict application of and adherence to our law of cure.

The recording of isolated clinical cases is not looked upon with favor by not a few of our practitioners; but as long as our hospitals, and those of our physicians who have the opportunity, fail to give to the profession the results of treatment extending over large series of cases, and thus statistically demonstrate the superiority or inferiority over other methods, that long will it be not only permissible but imperative to the practitioner to record the results of his or her experience, successes as well as failures. Let us fearlessly examine facts as they are. If the results of Homœopathic treatment fall short of our expectations or in comparison with other methods, let us examine into the causes of such failures before we condemn it, keeping ever in mind the advice of the immortal Hahnemann:

"Machts nach, machts ober genau mach."

Where certain we are united, be liberal where in doubt, and in all things charitable.

Permit me to bring the following clinical cases to your notice:

Case I. Goitre. Mrs. B. H., æt. 49. Came under my care in April, 1904. She presents a goitre of eight years' standing. Status quo. The hypertrophy is about equally developed over the entire gland, very hard and resisting to pressure. About two years ago she developed a cough accompanied by oppression of breathing. At the time when she came under my observations the breathing was labored, dyspnœa greatly aggravated by the least exertion, motion of the arms, and particularly going up stairs, or ascending generally. Cough harassing, greatly disturbing her sleep at night, but becomes greatly aggravated the moment she puts her feet upon the floor, when she loses her breath and feels as though she would strangle to death; drinking especially brings on the cough. She complains of a constrictive pain across the tumor. Has had a great deal of treatment, and was informed by the late Dr. Joseph Price, whom she consulted, that an operation, dangerous and difficult as it was, held out the only possibility of getting any relief. Prescribed Baryta carb. 30, on sugar disks, two every two or three hours. There was a marked amelioration of the cough about the third week, the dyspnœa became less and less. She continued under

treatment until December of the same year, at which time she was, and had been for some time, entirely free from any cough or oppression of breathing; can undergo any reasonable exertion, and is free from all pain in the tumor. The latter is now, comparatively speaking, soft, although its circumference is not materially diminished. I have seen the patient again in May of this year, when she still considers herself well, none of her tormenting symptoms having returned.

Case II. Psoriasis. Mrs. H., æt. 30. Farmer's wife and the mother of four children. Psoriasis of several years' standing, affecting almost the entire surface of the body. Lesions most pronounced on the extensor surfaces of the legs, especially the lower, where they cover almost the entire surface Patches of semicircinate, gyrate and serpentine forms. On the arms and trunk the lesions are more of the guttate and nummulate form. Patient complains of a moderate amount of burning and itching. The lesions present, with scarcely an exception, the glistening, pearly-white appearance, characteristic of the disease. She is a strongly pronounced brunette; face has a somewhat greasy appearance with some yellowish discolorations here and there, and a well-marked saddle across root of nose. Gave Sep. 1m, a dose every other night for one month, followed by placebo. At the end of six months scarcely a trace of the eruption was left. Prescribed Sul. 2c, which cleared up the remnant of the disease. This is over two years ago. Have prescribed since for this patient for other complaints, but there has been no return of the cutaneous trouble.

Case III. Mrs. B., æt. 59. Palmar and plantar psoriasis of long standing. This has been the most inveterate case of skin disease which it has ever fallen to my lot to treat. The disease began when patient was fifteen years of age; when, being in an over-heated condition, she was drenched with cold water. This sudden ablution was followed by a febrile reaction and a general eruption, the nature of which, however, the patient cannot now recall. While this eruption gradually receded, it appeared to concentrate itself upon the soles of the feet and the palmar surfaces of the hands. Status quo. Palmar and plantar surfaces covered with thick, horny plates, resembling almost in size, thickness and hardness those of a turtle shell, and varying in thickness from one to three-eighths of an inch, being thinnest on the palmar surfaces of the fingers and thickest on the soles of the feet. The plates were separated by deep

cracks, corresponding to the natural lines of the skin. Any possible separation of the latter, such as caused by walking, would give rise to oozing of blood. Flexure of the fingers was very limited, and in walking patient had to be careful to bring the plantar surface of the foot down simultaneously, and to avoid every unevenness of the ground. Otherwise patient was in excellent health, plethoric and decidedly adipose. Suffice it to say that this most unpromising case was entirely cured by Pix liquida, in potencies varying from the 30th upwards, the treatment extending over a period of more than two years. No external applications were used, either in this or the preceding case.

Case IV. Diffuse phlebitis. Mrs. S., æt. 42. Came under my care July 21, 1904, and gave the following history: In the latter part of February of the same year she had an attack of what her physician had called la grippe. Beginning of March both her hands began to swell, became very painful, and assumed a dusky color. Blebs, large and small, filled with a dark, dirty colored serum, formed here and there, broke and left an unhealthy, ulcerating surface behind. Had been under treatment by several allopathic physicians until the above mentioned date. Status quo. Hands up to the wrists discolored, a dusky, bluish color with superficial sloughing ulcers, emitting a putrid, cadaverous odor. The soft tissues felt doughy. A great deal of burning pain, extending in streaks up the arm; this was relieved by external applications of heat; the least cold would aggravate her suffering. Severe neuralgic pains in left upper arm, felt even in sleep. General debility; pulse rather small, 100-110; frequent shiverings with slight rises of temperatrue, not exceeding 100°. Locally, I applied Phenol sodique. Internally, Arsenic 6x-30. Under this treatment the ulceration became arrested, the swelling subsided, and the parts assumed a more normal appearance, so that at the end of six or seven weeks the case was entirely cured, though with considerable atrophy of the soft tissues. What remained was a great sensitiveness to the least cold. The neuritis did not entirely disappear for about six months.

DISCUSSION.

Dr. R. W. McClelland: I would like to say how deeply gratified I have been to be present at this meeting, and particularly to hear the papers on clinical medicine and Materia Medica. I have

been practicing medicine many years, and this is the first meeting I have been able to attend. I feel that such meetings as this are of inestimable advantage to every one. These cases recall to my mind one very convincing one of the all-sufficiency of the Homœopathically indicated remedy in cases which seem to belong almost exclusively to the domain of surgery. This case was presented some months ago, a young woman suffering with bony growths over the foot. It was a very peculiar case, and interested both myself and my brother very much. They were very hard bony growths, about half a dozen in number, dotted all over the surface of the foot, and necessitated the making of a special shoe, and interferred very greatly with her walking. The mother had consulted a prominent old school surgeon, and he had said the only hope of relief in this case was a surgical operation, and that even did not offer very much hope. The mother asked if there was any danger connected with that operation. He said there was danger connected with any operation, but that in this case there was the special danger of loss of power of locomotion, that in removing those lumps the tendons might be desroyed or interfered with, with consequent loss of motion. The mother was alarmed and consulted us. I told her we could chip off those growths as well as anybody, but there was a chance for a remedy. The remedy was prescribed, and in a very short time those growths entirely disappeared. The remedy prescribed in this case was not the remedy prescribed on its symptomatology. This was a case in which we prescribed altogether on the basis of the pathological condition she presented. There were no symptoms. We prescribed Hecla lava, twelfth decimal trituration, with the result stated.

Dr. F. W. Boyer: The encouragement to be derived from reading a paper such as Dr. Dietz has read to us is of very great moment to everyone. In busy practice we often fail to realize the similarity of the remedy, which appears to be the one indicated. Telling us of cases of this kind is an inducement for further and clearer study, for the keeping of our minds upon the conditions as they show in the patient, and for the continuance of a remedy if we believe that we have got the proper one. I doubt very much whether in either of these cases Dr. Dietz saw any distinct improvement within two weeks or a month, and it requires a great deal of courage to keep up a treatment for a month or more without seeing any improvement in a case that was so severe as either of those

mentioned by the doctor. An item of congratulation for us all is the fact that when we come to a medical society and hear the papers read and discussed we have a renewed interest in the practice of medicine. The day before yesterday Dr. Dietz mentioned a fact which I fully agree with, and that is that each time, whether it be a county society or a State society that we attend, we learn something to encourage us and to improve our knowledge. It is not for me to find fault with those who are absent, nor to contgratulate those who are present. If we cultivate the habit of attendance upon our State Society, we increase our knowledge, our loyalty and our enthusiasm for the cause. We cannot help it. There are so many good things presented to us that we must acquire the characteristics spoken of.

Dr. W. G. Dietz: Referring once more to the remarks made by Dr. Boyer as to the paper read yesterday, it was hardly in keeping to refer to that now, that we should expect improvement, be sure to prescribe and be sure to have improvement when the patient came again in a week's time, that is fallacious teaching. That is wrong. A disease which has extended over a period of five, ten or fifteen years, or perhaps a whole lifetime in its insidious form, and has not been recognized, you cannot expect to improve in a week's time, and what is worse, if you have improvement in a chronic disease of such long standing, and have it in a very short time, you can almost with mathematical exactitude say you will not cure your patient. It is an acute improvement which will soon cease. You go from one remedy to another, and a cure will not follow. A deep acting remedy, which is going to the very root of a chronic disease, will act slowly. I tell my patients, "Don't expect anything when you come again. You may be a little better and you may not." In a case of goitre while all distressing symptoms disappeared, the goitre persisted and persists to this day. That woman considers herself practically well for all purposes. She was distracted. She said she would commit suicide or do something desperate; she might just as well die under the knife as live the existence she had. She could hardly walk along the floor without gasping for breath. The goitre was not excessively large, I think only about sixteen or seventeen inches around the most prominent part, including the whole neck, but it was of stony hardness, which induced me to prescribe as I did. We must not expect rapid results in chronic disease.

THE STATUS OF THE CONSUMPTIVE.

F. W. BOYER, M. D., POTTSVILLE.

I should like to say at the outset that this paper is the result of investigations by others, and has been compiled from medical journals and other sources too numerous to mention in particular.

In presenting this subject my object is to call the attention of this Society to the rapid advances made in the care of consumptives since the theory of fresh air and nutrition was first declared, about 1860, as the one successful means for combating the disease. At that time it appeared that some special element of nutrition provided with some curative balsam was needed. Cod liver oil, rich in iodine, bromine, etc., was the cure all. Whiskey was recommended ad libitum.

Many intelligent physicians recognized at that time that nutrition, in whatever form it could be given and assimilated, afforded the way out from the depression which preceded the outset of the dreaded disease. Fresh air and out-door living were also recognized as factors in the prevention and cure of this serious malady. A case much quoted at the time was that of a gentleman, a pronounced consumptive, and his family setting out from New Haven, and making the tour of the New England States in a vehicle, camping nights; they spent the entire summer in this way; the father returned cured and the family in robust health. To-day this is no longer an isolated instance.

Medical journals, the public prints and bulletins issued by the States all tell of out-door living, nutritious and easily assimilated foods, the care of the person, associations and housing.

This constitutes the theory of healthful living, and is not only a preventive of consumption, but a safeguard against all the ills human flesh is heir to.

For who can deny that with a fully nourished system and a wholesome body that the resisting power to disease is at its highest. Since 1861 the death rate from tuberculosis has been reduced 45 per cent., with us the greater percentage since 1890.

The prominence given to this subject has wrought other than good to the consumptive.

In many minds fear is aroused, and fear begets apprehension, a

selfishness and cruelty, cruelty to the verge of ostracising the poor consumptive victim and often to his neglect.

Statistics show a condition indeed alarming. Reliable authorities declare that 100,000 of our population die every year of tuberculosis. Multiply this number by three and we have a very moderate estimate of the number in this country, incapacitated by the disease. Every other adult, among American negroes, is destroyed by it, although it was almost unknown among the slaves, and in Africa is only found where there is contact with the whites.

One-half of the deaths among the American Indians are also attributed to this disease. The Sisseton Indians, one of the most industrious, peace-loving tribes, are likely to be exterminated by it. Chinese in this country are also afflicted, and among them the death rate is very high.

Among the foreign races the Irish lead all other Europeans, with Bohemia and Scandinavia a long way behind. The Hungarians, Russians and Poles are mostly Jews, who, on account of temperate habits, food regulations and forty centuries of racial existence are comparatively immune. So many Italians return to their own country to die, and are so disposed to conceal cases, that among them statistics are unsatisfactory. One-third of the deaths of persons between twenty and thirty years of age in Brooklyn are said to be due to phthisis.

Paul Paquin states that the death roll of all the wars of the nineteenth century is estimated at 14,000,000, and of tuberculosis at 30,000,000. It invalidates each victim one or two years, with a probable financial loss of over $76,000,000 annually.

In Pennsylvania there is a tuberculosis population of about 70,000, and in Philadelphia of 15,000.

In the face of these numbers and of the fact that whole families become involved, and that physicians pronounce the disease contagious, it is not strange that the public has been aroused to interest in a class who form so large a part of its membership.

In the past, even in the recent past, the status of the consumptive was an object of pity as afflicted with an incurable disease; then a source of infection to be shunned, and only lately as a reasonable object of a physician's skill. Years ago a physician gave his diagnosis as a judge his sentence to the condemned: the difference was in favor of the criminal, as the State provided him with some degree of physical comfort in his last days.

To the medical profession in part is due the unreasonable fear called phthisophobia. When a disease is called contagious, the source of contagion *should be clearly explained and the method of protection taught.*

One effort at self-protection was to send consumptives to another climate, and vigorous protests are coming from physicians in the South and West against sending the hopelessly ill away from home and friends without means to obtain even the necessities of life. (It is similar to a policeman's "move on.")

Since attempts have been made at segregation in sanatoriums, objections are made to this humane effort as depreciating the value of property and menacing the health of the locality. At Mt. Airy such objections were carried to the courts. The same measures were resorted to to prevent the establishment of a sanatorium in the Shwangunk mountains to provide for the poor of New York.

A movement is on foot to prohibit patients at White Haven from entering the town. In Jersey City the board of health was urged to compel railroads that transport patients to the State sanatorium to provide special trains and boats for their use, and to forbid them using station rooms and passageways provided for the general public.

It is not the purpose at this time to discuss the treatment of consumption but the treatment of the consumptive. We are learning that change of climate, once thought so necessary, is only an adjunct. While some climates are more favorable than others toward a cure, we may make use of the hygienic-dietetic treatment in our own locality.

In Pennsylvania the proportionate death rate, though too high for this age of medical science, is next to the lowest of any of the States.

We have learned also that isolation is necessary only when diseased tissues are being thrown off, and the patient cannot or will not properly dispose of them.

The interest of the profession in this subject is shown by the organization of committees and in the American Antituberculosis Congress, which met in Atlanta, Ga., in April last. There were about five hundred physicians in attendance from nearly every part of the United States east of the Rocky mountains.

In May the National Association for the study and prevention of tuberculosis met in Washington, when the consumptive was con-

sidered in his sociological, pathological, chemical and climatological aspects.

The Maryland Society for the Prevention of Tuberculosis decided to instruct the public in regard to prevention. They hope to effect this through a methodical system of lectures, leaflets and meetings. In this direction thirteen public lectures were given last winter, which were attended by about fifteen hundred persons.

The White Haven Sanatorium conducted an exhibit at Philadelphia for the purpose of interesting the philanthropic. This exhibit consisted of photographs of the buildings, a tent outfit, a properly equipped room for tuberculous patients, and the various articles used in the practical prevention.

There are in all thirty-nine associations having in view the same object as those above mentioned. We must look to those associations for the most active and scientific measures for suppressing tuberculosis and ensuring for its victims the most natural life possible.

They not only seek to care for advanced cases, but to prevent infection, and to instruct the public to combine wisdom and mercy. They study climates and occupations in order that incipient and cured cases may follow a normal manner of living. Sanatoriums and dispensaries follow as a natural result.

In Washington, where the National Association met last May, the death rate from consumption is the greatest in the United States except Denver and Los Angeles, and possibly San Francisco.

The only provision for those ill is a tent ward in asylum hospital for the poor of the district. This accommodates thirty-four patients.

Thirty-four States (including the District of Columbia) have some sort of institutions for patients, either established or nearly completed. There is also one at Honolulu. These accommodate a few over 8,000 patients; from 8,000 to 8,400.

There are 135 institutions in the United States and Canada, of which one-third are in New York and Pennsylvania. Fourteen were established in 1902, twenty-four were established in 1903, twenty-one were established in 1904.

The beneficial results of sanatoriums have been demonstrated in London, where in forty years that measure and no other reduced the death rate one-third.

In this country the first institution for the care of the advanced

consumptive was the Channing Home in Boston (1857), next the Cullis Consumptive Home, same year. Lincoln Home in New York (1839) and the House of the Good Samaritan in Boston (1861), received incurables of any type. These were for hopeless cases.

The sanatorium for the cure of tuberculosis was inaugurated at Saranac twenty years ago. The first State sanatorium was established at Rutland, Mass., in 1898; New York next, 1904, at Ray Brook, in the Adirondacks.

In seven other States, Rhode Island, New Jersey, Minnesota, Ohio, Missouri, Michigan and Wisconsin, a beginning has been made. In the others either the measures have been defeated or none have been attempted.

Th National Government has made provisions for only thirty-four patients in the District of Columbia, although the population of Washington alone is over 278,000. A temporary tent camp is located on the grounds of the Naval Hospital in Pensacola for about fifty in the service, and another at Fort Stanton, New Mexico, for seamen of the merchant marine service, light house crews and of vessels other than of the navy. This provides for 225. There is a temporary one at Port Royal, S. C.

An army hospital is at Fort Bayard, New Mexico, and the Bureau of Medicine and Surgery is now making a study of abandoned army posts in favorable locations for the establishments of sanatoriums.

A noteworthy sanatorium is the Adirondack camp for favorable types. The uniform charge is $5.00 a week, but a free bed fund makes a prolonged stay possible. It was begun in 1885 in a one roomed cottage, heated by a wood stove and lighted by a kerosene lamp, and has grown to a small village of twenty-one cottages, an infirmary, a pavilion, a chapel, a library and a post office. In the first years there was difficulty in inducing patients to go to it, but now not one applicant in twenty can be admitted.

California has no State sanatorium, but at Indio Mr. Nelson, of St. Louis, bought 200 acres at the entrance to the Great Desert to care for such patients. The locality is twenty feet below sea level and is protected by mountains from rain and fog; the average rain fall does not exceed one inch, and all winter days are comfortable. The capacity is practically unlimited, as seventy-five acres are under cultivation. Hospitality is extended to whole families, and pro-

vision is made for a home for convalescents. No one is excluded on account of wealth or poverty. Those able to pay are charged $1.00 or more a week for the use of a furnished tent and $3.00 for board. The work on the farm is largely done by the able-bodied members of the community.

Among the many good deeds of the New York Commission for Improving the Condition of the Poor is the seaside tent camp for children at Coney Island (which the President recently visited). This is an experimental sanatorium, the first of its kind in America for the treatment of non-pulmonary tuberculosis in children between the ages of three and ten years. It is designed as a demonstration and is not permanently established. Major surgical operations are not a feature, the design is to show that hygienic living may sometimes render them unnecessary.

At Foster, Rhode Island, a farm of fifty acres is used as a camp; capacity, twenty-five in winter and sixty in summer. To solve the problem of expense abandoned trolley cars have been utilized as bed rooms.

The Cigar Makers' Union advocates the establishment of farms and camps for such of their members as are afflicted.

The proposed locations are in the Adirondacks, North Carolina, on the Pacific Coast, and in the Middle West

The Y. M. C. A. are also establishing camps in favorable localities.

In Pennsylvania the first institutions, especially for the care of consumptives, were the Hospital for Diseases of the Lungs at Chestnut Hill and the House of Mercy, 411 Spruce street, Philadelphia. Both were founded in 1876 by the Episcopal City Mission.

Attempts have been made to secure a State sanatorium so far without success. The State, however, contributes to the support of such institutions as now exist.

Rush Hospital, Lancaster avenue and 33d street, Philadelphia, was founded in 1892. So far as I have been able to ascertain, the eight others and the projected one in Pittsburg have all been established in or since 1900. In the General Hospital, Philadelphia, the consumptives for ten years have been isolated in wards. During the summer of 1903 the hospital roof was converted into a ward, where as many as possible of the incipient cases were kept night and day.

A new building, to accommodate sixty, and six pavilions made

entirely of steel and glass, to accommodate eighteen each, have just been completed.

The Henry Phipps Institute maintains a hospital for advanced cases.

The Lucien Moss Home and the Dermady Sanatorium at Mt. Airy receive patients in every stage. Any physician may place and treat patients in them. These furnish bed capacity for 418 patients, but we hope in summer, at least, the out-door capacity is increased.

Through the interest of Dr. Rothrock, our State Commissioner of Forestry, the South Mountain camp has been established at Mont Alto, Franklin county. The accommodations at present are for 38 persons. The land and buildings are State property. There are eleven plain board cabins, ten feet square, intended for two men each, and seven cottages for women, each cottage with two rooms and a small kitchen. Cots and stoves are the only furniture provided; a large assembly room may be used by all. The State supplies shelter, fuel, air and water, and requires the observance of certain rules. Campers provide their own food. A private sanatorium for about ten patients is situated within one-half mile of the grounds.

White Haven receives one hundred cases without charge. It is supported by State appropriation and private contributions. The grounds include 215 acres. There is also a pay ward.

These are mentioned as being of special interest. Other institutions are at Greentown, Pike county; Lansford, Scranton and Sunnyrest, overlooking the Lehigh valley.

Outside of Philadelphia there is provision for about 300 so, making a liberal estimate, only 750 of our 70,000 consumptives are assured of proper care in fifteen sanatoriums or houses of rest.

Seventy-five per cent. of the applicants at sanatoriums for incipient cases are refused because the disease is too far advanced to ensure a cure. For this reason physicians are urged to make an early diagnosis. Three and one-half months is said to be by some one the average time from the beginning of the disease to the development of the tubercle bacillus. Loomis believes the majority of patients who apparently develop tuberculosis after thirty have had a previous attack.

The statistics given show what the public has done for the consumptive in regard to sanatoriums. It may seem strange, but there

is a return benefit from the consumptive to the community where he lives under medical oversight. Far from being a menace to a community, sanatoriums and camps are declared to be so practical a demonstration of hygienic living as to reduce the death rate, and to increase the health of their immediate neighborhood. As, however, only less than 8,500 of our numerous population can be received as residents in our institutions, the farther reaching work of dispensaries is evident. There are thirty-one of these in the country, and their reports show nearly 10,000 patients treated each year. Eleven of these are district offices in the tuberculosis committee system in Chicago.

The Henry Phipps Institute (endowed by Mr. Phipps, of Pittsburg) includes a hospital for advanced cases, a laboratory for research and a dispensary where 2,040 persons were treated the first year.

Milk is supplied when the physician sees fit. Two nurses are employed to visit homes. Sputum cups are supplied, and each person receives verbal and printed instructions for his own care and to prevent him from infecting others. The instructions are supplied in two forms, a printed folder for the pocket and a placard for the home.

In New York City the municipal clinic prints circulars of instructions in nine or ten languages. Some dispensaries furnish reclining chairs and sleeping bags for out-door sleeping on roofs and fire escapes.

Special care is given tuberculosis patients in fifteen hospitals for the insane and in seven penal institutions.

To ascertain the extent of municipal oversight the compiler of the tuberculosis directory sent letters of inquiry to seventy-eight cities in the United States of more than 50,000 inhabitants. From ten of these no answer, even to a second letter, was received. We must all regret that four Pennsylvania cities showed this discourtesy, Pittsburg, Allegheny, Harrisburg and Scranton. In the remaining sixty-eight, fifty-nine officially recognized the disease as communicable.

In some cities the only effort to efface it is an ordinance forbidding expectoration in street cars, and it is left to the car conductor to enforce. In only four cities are the ordinances said to be strictly enforced. Municipal control does not mean arbitrary interference by the board of health.

In the best regulated cities physicians are requested, but not always required, to report each case. The house is not placarded, but on the death or removal of a patient is disinfected. The city pays for disinfection and the owner for renovation.

The indigent are cared for. New York City furnishes nurses who speak French, German, Yiddish, Russian, Italian, Chinese, Slavak and Polish languages. In New York it has been the custom for the last two or three years to inquire from the physician who reports a case as to the conditions, and, with the consent of the physician, to locate such patients as have passed from his observation and find out their condition. As a result of wise regulations there has been a more rapid fall in the death rate in New York City than any other city in the world, notwithstanding the crowded tenement district and the large foreign born population.

Dr. Biggs, the medical officer of the board of health, says of all the great infectious diseases consumption is the most preventable.

I should like to use as a conclusion an extract from an address by Dr. Devine, read before the National Association for the Study and Prevention of Tuberculosis, last May:

"Next to the creation of hospital and dispensary facilities, possibly of even earlier urgency, is the necessity of educating the rank and file of the medical profession as to the need for early diagnosis, registration and protection from infection by all conservative and reasonable means. One need not go so far as an eminent physician has gone in declaring that on a subject like this it is infinitely easier to secure the co-operation of the tenement house population than to win that of the doctors. I hold that to be an unduly pessimistic view, though it was based on sad experience. Without going so far it may still be permitted courteously to point out that if the specialists and the pioneers are right, the practice of a very large number of family physicians is wrong—wrong, that is to say, in not making sure from the first manifestations of the disease in any member of the family that rigorous prophylactic measures are taken to insure immunity for the others, and wrong in the failure to join heartily in securing the adoption of energetic educational and preventive measures.

"And next after these two great undertakings comes the yet greater, and it may be we should say even more elementary undertaking, to which repeated reference has been made already, the creation of a sound public opinion, midway between indifference and

phthisiphobia, an enlightened public opinion in which every one is frightened just enough to act sensibly, and not enough to act foolishly; just enough to insure necessary public appropriations and private donations, but not enough to make it difficult for a cured and educated consumptive to find a job; just enough to cause the railways to disinfect the hangings of a sleeping car and the cushions of a day coach, but not enough to cause them to refuse to an indigent consumptive girl, on her way to a sanatorium, the charitable reduction which is given to all other indigent persons; just enough to cause the city to build a sanatorium, but not enough to induce the legislature to permit local prejudice to close county after county to the urgently needed sanatorium, except on a bribe to the county commissioners, and the township trustees, where this happy golden mean of public opinion is to be found in every community, the death rate from tuberculosis will diminish with a rapidity which will enable us to contemplate the speedy dissolution of our association for the prevention of this disease, and will release for the next big task the energy and the financial resources which for the present are imperatively demanded for this above all others."

DISCUSSION.

Dr. M A. Wesner: I can tell you about a sanatorium at White Haven that is under the charge of my old student, Dr. Flick. He found that he had incipient tuberculosis, so pronounced by several able physicians in Philadelphia. He relinquished his practice and went West. He went first to Colorado and then to Arizona, and finally stopped at Los Angeles, Southern California, and spent a year there in the open air. He made orange boxes, and worked around at anything at all to pass away his time. At the end of the year he came back the picture of health, and has practiced ever since. I think that the climate was the means of helping him out, because the trouble was in an early stage. I understand in the sanatorium at White Haven they use no medicine at all. They keep patients in the open air. They feed them. Every person who goes there has to take five or six raw eggs every day and two quarts of milk. He can eat whatever he wants besides that, but he must take that much. They have to keep in the open air the whole winter. Some have had frozen feet. They put on larger shoes and send them out again to stay there, no matter how cold it is. The sana-

torium is on the Blue Mountains above White Haven. The patients come in for their meals three times a day and go out again. In the evening when they retire they close down all the windows and shut the doors for about an hour to heat the bedroom, and when they have all retired the nurses throw open all the windows and doors and let them lie in the air at night. In the morning before they arise the windows are closed again, and they get up and clothe themselves. Of course, they have to be clad warmly all the time or they could not stand the outside cold. It is claimed that patients do very well under that treatment. Of course, it is only a new arrangement, has been in operation only a couple of years, and we have to wait to see what the result of it is, but I believe if they had a few doses of similia every month they would do better.

SCARLATINA.

EDWARD CRANCH, PH. B., M. D., ERIE.

It is intended in this paper to give only such results and deductions as have been verified in the writer's own experience, not because of any special merit in these notes, but because it is due to medical science to add one's mite to the general fund.

Five points will be considered: 1, Contagion; 2, Degrees of virulence; 3, Complications; 4, Treatment; 5, Prophylaxis.

In regard to contagion, it is very evident that of all who are exposed many do not take the fever, even if they have never had it. It is a frequent experience that if a case comes to school only one or two of the scholars will contract the disease, and in orphan asylums, where the children are thrown together much more thoroughly, it often happens that over fifty per cent. escape the contagion.

On the other hand, children have taken scarlatina from the presence of one who had visited a case fifty miles away, or from passing the open door of a house where one was ill with the disease, and the poison has been carried in books and letters.

The time of greatest danger of the spread of the disease is in the full eruptive stage. Desquamation has its terrors, and is popularly supposed to be the worst time for giving it, but it is really not so

likely to communicate the disorder as is the air in the breath and in the room of the patient while he is covered with the rash.

Oiling the skin hinders the scattering of flakes, and if due care is exercised as to cleanliness and separation of dishes and clothing, with disinfection of discharges, one case in a house need not spread to others in the same, even if the attendants have to go freely about the whole building.

After the age of eighteen, susceptibility decreases, and cases among adults are rare, except in the form of diphtheritic tonsillitis, showing that the air is the chief route for the infection.

2. Degrees of virulence are of the utmost variety, being worst, to all appearances, in those who inherit syphilis, sycosis, or a high grade of lithæmia.

In some epidemics there is an excess of severe cases, while weather conditions may entail complications.

The most violent may come from exposure to the mildest, and herein lies the most fruitful source of epidemics, being spread by those cases that are so light as to wholly escape notice, or that are regarded as simple erythema.

3. A constant relation between scarlatina and diphtheria is very often noted, epidemics of the two diseases following or accompanying one another, and close observation showing that many cases of diphtheria are really cases of scarlatina anginosa, or the tonsillar manifestations of the poison, which also occurs, even repeatedly, in adults having the care of scarlet fever cases.

If severe complications are about to arise, signs of the event generally commence by the second day, and are known in higher temperature, blotchy appearance of eruption, with large spaces entirely clear of the rash, puffiness of hands, feet and eyelids, delirium, persistent vomiting, dusky hue of skin, pain in stomach, headache or early swelling of the parotids.

Improvement and waning of the complications is shown by the increasing evenness of the eruption, fall of temperature and return of appetite.

Among complications most to be dreaded are evidences of nephritis, otitis, laryngitis and arthritis, followed, respectively, perhaps, by dropsy, deaf-mutism, membraneous croup or anchylosis of joints. Other less frequent complications are meningitis, cerebritis, ophthalmia, parotitis, glandular and bursal abscesses and erysipelas.

In scarlatina the weakest organs are the ears and kidneys, while in measles the lungs and eyes are the chief sufferers.

Other eruptive diseases may be acquired at or near the same time, and the consequences of such collisions are apt to be disastrous.

The present writer, in thirty-four years' practice, has had only two cases of the simultaneous development of scarlatina and measles in the same subject, and both children died. In the first the patient came down with a typical eruption of measles, which suddenly disappeared, being replaced without perceptible interval by an equally typical eruption of scarlet fever, followed in turn by membraneous croup, of which the patient died. The sister of this patient, who was the first to have the scarlet fever, recovered in good shape, and a few days later developed measles, which she had caught from the sister who died. The mother at the same time developed measles, thus completing the evidence of the existenc of the two diseases in the family.

Here the scarlet fever, meeting the measles, seemed to abort the latter most peremptorily, for the measle eruption was completely wiped out over night. Such instances, observed by Hahnemann, were adduced by him as an illustration of his understanding of the operation of the homœopathic law, as showing that one disease was checked or cured (?) by another similar disease. Hence, he argued, if any disease is opposed by a similar and stronger drug disease a homœopathic cure would result.

The writer's next case of the kind, however, did not support this philosophy of disease, for both eruptions persisted, showing all over the patient, with a dusky hue of the skin, and a somnolent lethargy of the patient, which ended fatally on the fourth day, without either disease having gained the mastery.

Hence, some other explanation of the working of the homœopathic law must prevail, namely, that every mode of excitation of the living organism, whether by drugs, electricity, mechanical vibration, Roentgen rays or any other mode of stimulation, will be capable, in change of circumstances, such as size of dose, mode of applying stimulus, or in differing states of patients, of giving rise to an exactly opposite reaction. And such reactions, being made use of in restoring healthy vitality to the sick, constitute the operation of *the* law of cure, our controlling principle in medicine, Homœopathy.

4. In treatment, it seems best, in scarlet fever, to avoid acid foods

and drinks, to give freely of cool water, and to forbid bathing, not using even hot baths or fomentations, unless in cases of greatly delayed eruption or in meningeal complications. Avoid over-feeding at all times, and give only such diet as will not delay assimilation or elimination and will not irritate the kidneys. Hence, sweetmeats are nearly as objectionable as acids, while meat, eggs and tomatoes should be absolutely interdicted.

Keep close watch on the urine, with proper tests for quantity and quality.

Do not give Belladonna to every case just because it is "good in scarlatina." If the nose is much stopped think of Amonium carbonicum. In persistent vomiting and in asthmatic cases always think of Kali arsenicosum. If the eruption is uneven or delayed think of Bryonia. If there is much nervousness and delirium consult Belladonna, Cuprum, Zinc, Helleborous, Stramonium, Rhus and Ammonium bromidum. In tonsillary complications compare Apis, Lachesis, Phytolacca, Hepar, Mercurius, Aconite and Ignatia.

In otitis never forget Baryta carbonica, Graphites and Silica.

In parotitis compare Rhus and Phytolacca. In ophthalmia, Euphrasia and Conium are useful. In gastralgia, Aconite, Chamomilla and Cina. In dropsy, Apis, Lycopodium and Helleborus. Never neglect any remedy that corresponds to the most striking features of the case, whether it has ever been used in the disease or not.

5. Prophylaxis. In spite of strong testimony in favor of the pre-administration of Belladonna, or Apis, or Rhus, the most eminent men favoring Belladonna in the thirtieth potency, as a prophylactic against this disease, the present writer has seen no instance offering any evidence in any way conclusive to himself of the preventive power of any drug, in any potency, or in any mode of repetition.

Preparations of Belladonna of known and proven efficiency, and of accurate potency, from the 3d to the 1000th, have been employed, with the result, in many cases, it is true, of delaying the eruption and apparently lessening its force, but also very often with the most unpleasant consequences later on, so that it has appeared to do more harm than good, whether given only once or three or four times a day.

When the writer, however, is treating this disease, he always gives a dose of Belladonna to each inmate of his own family, and so far not one of his children has had it.

SOME THINGS TO BE CONSIDERED—AUTO-INTOXICATION, OVERSTRAIN, EXERCISE AND BATHING.

C. SPENCER KINNEY, M. D., EASTON.

In the published transactions of the Homœopathic Society of the State of New York the following is printed yearly by order of the Society:

"I define a Homœopathic physician as one who adds to his knowledge of medicine a special knowledge of Homœopathic therapeutics. All that pertains to the great field of medical training is his by tradition, by inheritance, by right."

PRESIDENT EUGENE H. PORTER.

Feb., 1898.

When we are called to the bedside of the sick it is to give help, and that as speedily as possibe, by such means as lie within our knowledge. Our patient is entitled to the best and most approved method of treatment at our hands, and it becomes our duty to see that he gets it. Whether this help goes out to him in the form of suggestion for a change in his habits of living or thinking, or through the aid of properly selected drugs he is entitled to the highest we can give. We must recollect that the patient seldom cares for our theories regarding the practice of medicine—what he wants is help in time of present trouble. While our belief in the law of S. S. C. naturally creates every confidence toward the giving of drugs in accordance with this law, we should not overlook some of the more common aids to our work which experience has demonstrated are safe, wise and right to employ.

I have known a patient to go two weeks without a movement of the bowels, and during that period take medicine from the 1st to the 200th, inclusive, of what seemed to be the indicated remedy, but when relief did come it was followed by dysentery, prostration and emaciation for over six weeks, leaving the patient depressed in body and mind. *No such condition would have resulted* had colonic flushing been used as it is now understood and used by thousands who believe in it. Let me read you the most approved method as given by Dr. W. E. Forest in his book, "The New Method," p. 27: "Remember that 'flushing the colon' is a very different procedure from 'taking an injection,' as this is ordinarily practiced. In taking

an injection a cup or two of water is thrown into the lower part of the colon up some six or seven inches and almost immediately expelled. If there are any offending matters at the outlet they may be discharged. The object in 'flushing the colon,' on the other hand, is to carry the heated liquid far up the colon, to have it retained as long as possible and then to cause a thorough cleansing of the whole canal. The difference in principle between the two procedures may best be explained by a homely illustration:

"When your coal stove has been run continuously for a long time the grate becomes clogged with cinders and ashes. As a consequence, the fire burns dully. You poke and rake at the cinders and get a few out, but their place is taken by others from above and the fire still smoulders. In desperation you at length 'dump the grate' and commence the fire anew. Then you have a roaring, cheerful blaze that does one good to see."

Now, "flushing the colon" is similar to "dumping the grate" in your furnace. It is a radical treatment, and all the functions of the body take a new start. To flush the colon properly one should take at least two quarts of hot water, water as hot as one can bear the hand in comfortably. Put into this water a tablespoonful of salt, there being no better disinfectant for internal organs than salt. A fountain syringe should be used, and there are various positions that may be taken in flushing the colon; the simplest is to lie on the right side with the right arm behind, so as to turn the body somewhat. If this causes pain or the water is not retained, lie on the back with the hips elevated, or take the knee-chest position, resting the body on the knees and the chest. Usually after a little water has been introduced into the colon a strong desire to pass it out will be experienced. The flow into the colon should be checked and the feeling resisted. In a minute or two it will pass over. Then the injection should be continued. If, however, the desire be very strong and continuous, it is well to suspend the flushing and discharge the liquid with fæcal matters that may be present at the outlet. Then after a minute or two commence the flushing again.

After all the water has been introduced the patient lies as quietly as he can and causes gentle contractions or drawing up and relaxing the muscles of the stomach. This movement forces the water along the colon and loosens up its contents. The abdomen may also be gently rubbed and kneaded with the hands. After a few minutes the patient will rise and discharge the water, a little at a time.

Of course, the first or even the second time one tries to "flush the colon" there may be difficulty in carrying it out as laid down here. Some patients cannot use more than a quart of hot water at first, others not even as much; but the large majority can from the first use from two to two and a half quarts at a single injection. The treatment should be resorted to at night just before retiring. One is apt to feel fatigue and exhaustion immediately afer, but this will pass off in a short time and the subject will wake up refreshed and hungry in the morning. If the bowels are badly constipated, with much hardened and impacted fæces in the colon, it will be well to add some pure castile or gluten soap to the water which should always be clean. Sterilized water, I think, is the best to use.

The treatment should be repeated until the colon is completely cleansed, which will usually be indicated by the water coming clean and clear, free from fæcal matter, sometimes requiring a large number of injections, and when the system is in a bad condition flushing should be resorted to daily, thoroughly cleansing the colon each time until there is a marked improvement, when the flushings can be less frequently employed."

The good effect of this treatment is not alone felt by the bowels, but by the kidneys as well. Where the water, or part of it, is retained over night, it is passed off by the kidneys, flushing them as thoroughly as by any more direct method. Where there is an enlarged prostate, and the urine has much sediment and a strong ammoniacal odor, this colonic treatment will save you many a troubled hour and prolong the life of your patient.

ANTISEPTIC TREATMENT OF INTESTINAL TROUBLES.

Dr. Mason Good said: "The effect of medicine on the human system is in the highest degree uncertain, except, indeed, that it has already destroyed more lives than war, pestilence and famine combined." This is frequently quoted by those who are opposed to the giving of drugs, but Homœopathists are not annoyed by it, as it does not relate to their method of practice. The Homœopathic school has been and is so very successful in the treatment of disease, noticeably those of an intestinal character, that we, as Homœopathic physicians, are in danger of neglecting a very important factor in our practice, and that is the use of intestinal antiseptics. The lack of succes that met the efforts of the old school in the treatment of intestinal diseases led to experiments that have been productive of value to thousands of patients treated. Boiling suspected drinking

water for typhoid is the first step of these experiments; flushing the colon with sterilized water is another step, and the giving of drugs inimical to bacterial life is the latest successful experimentation.

Talking with a physician who for years has been an earnest student in our Materia Medica, I was given the following experience of his typhoid cases, the temperature never going over 102, no delirium, no hæmorrhage or perforation, and the disease seldom lasting three weeks and rarely over two weeks. The method employed by him I give here in his own words:

"During my first years of practice I was called to attend a mother and two daughters, all had typhoid and all died. I worked very hard to save their lives, but to no avail. I was very much discouraged and disgusted and felt that I ought really to fold up my sign in my diploma and drop the whole business into a bottomless pit. After the reaction had subsided, I determined, if possible, to find something in the way of a remedy that would rob typhoid of some of its horrors. I accidentally fell upon an article of Dr. Waugh's on the great value of Zinc Sulpho Carbolate in typhoid. I carried out Waugh's ideas to the letter in my next case of the fever and the result confirmed all he claimed. I have carried out a line of treatment in which intestinal antisepsis plays a most important part for the last twenty years, and I have never lost a patient, although many of the patients had not a change of bed linen or a bath during their sickness. My treatment is this:

"If I find the patient constipated I give 1-10 gr. Calomel and 1-6 gr. Podophyllin at a dose, giving four to six doses at half hour intervals. I follow this up with a saline, generally Rubinal water. I then start in giving five to ten grains of the sulpho-carbolates of lime, zinc and soda—in tablet form—every two hours, together with a 5 gr. tablet of Magnesium Dioxide, which is rich in oxygen. This combination, besides being an ideal intestinal antiseptic, seems to regulate and stimulate the heart better than any of the cardiac tonics I know of. Patients ill of typhoid, treated in this way occasion a physician no more worry or anxiety than any case of simple diarrhœa. Not one of the awful symptoms one naturally associates with typhoid can possibly exist, because the remedy is aimed directly to the exciting cause. The ideal tonic during convalescence is Magnesium Dioxide (Mg. O.2) in the 5 gr. doses, every three or four hours. In treatment of erysipelas, after thoroughly flushing the bowels, carry out the regular treatment I have outlined for typhoid and you will

be surprised to see how rapidly all the symptoms subside."—Dr. F. S. Bloss, Troy, N. Y.

From "A Consideration of Auto-Intoxication and Auto-Infection as Cause of Various Mental Disorders," by Dr. L. Vernon Briggs, of Boston, I submit the following literal extract, for the article represents the opinions of many experienced men:

Experience has shown that auto-intoxication is a factor in so-called mental disease. Many cases in State hospitals, supposed to be insane, should be placed in general hospitals as cases of auto-intoxication for active treatment. Auto-intoxication is a poisoning of the system, produced by disturbed metabolism, and auto-infection is due to the bodily presence of some form of bacterial life, the symptoms representing part of a general toxæmia. Possibly heredity is an inadequate cause for auto-intoxication, and a microbe exists, as in phthisis. The various forms of toxic insanity produced by drugs and stimulants are well known. Moreover, Spitzka, Clouston and Kraeplin have failed to discover any change of the brain in cases of melancholia, acute mania and other mental disease. Why then waste time in speaking of diseases of the brain when we successfully treat other toxic cases as due to perverted metabolism and the work of bacteria? Several early writers on medicine had the cause of auto-intoxication in mental diseases in mind, among them being Culpepper and Barton. Authors of to-day refer briefly to auto-intoxication as a cause of certain forms of insanity, but fail to mention the disease of auto-intoxication, of which the mental condition is only the result. Bouchard speaks of an arthritico-nervous cycle of diseases caused by auto-intoxication.

Defendorf in his excellent translation of Kraeplin says: "If the researches of Kranisky, Cabbito and Ayostini can be substantiated, it would seem probable that genuine epilepsy is due to a toxic condition arising from faulty metabolism, and that the immediate cause of the appearance of convulsions is the accumulation of deleterious substances in the blood."

According to Bouchard, "Arthritism is made up of a host of manifestations that all appertain to an arthritico-nervous cycle, in which we find, side by side, migraine, epilepsy, gout, hysteria, rheumatism, diabetes, etc., and is especially characterized by a tendency to congestion by reason of which, or on account of some yet unknown cause, the general nutrition is profoundly altered. Arthritic subjects are often dyspeptic, some having dilation of the

stomach, others intestinal indigestion. This is a source of toxic action, by way of auto-intoxication." He also says that "neurasthenia is one of the most frequent of the neuroses related to arthritism, and that arthritism may be the originating cause of hysteria (Bouchard, Charcot), epilepsy (B. Tessier), angina pectoris (Dandouzy) and paralysis agitans (Pierret, Vansells). Therefore, if auto-intoxication is one of the underlying causes of arthritism it is one of the originating causes of neurasthenia and the diseases just mentioned."

Dr. Keene, in quoting Bouchard, says: "Bouchard has determined a unit of poison which he calls a toxic unit and defines as the amount of poison required to kill one kilogram of living matter. The urotoxic is the quantity of urinary alkaloids capable of killing a rabbit weighing a kilogram. The urotoxic coefficient in man is .465. In other words, for each kilogram of body weight enough poison is excreted in twenty-four hours to kill 465 gm. of living matter, or in two days and four hours a man execrates enough poison to kill himself. These facts are of the utmost importance to the alienist. Heredity may in time be as much divorced from insanity by the toxins as it has been separated from phthisis by the bacillus of Koch."

Auto-intoxication in mental diseases was one of the chief topics for discussion at the annual congress of French alienists held at La Rochelle, in August, 1894. At that time Drs. E. Regis and A. Chevalier-Lavaure made a most masterly report. They distinguished these orders of clinical facts, and considered separately the mental disorders that develop as a result of (1) acute infectious diseases, (2) those due to vesical disturbances, (3) those of the diathetic maladies.

We all know that typhoid and eruptive fevers, "grip," erysipelas, puerperal fevers, etc., are oftentimes followed by the most marked insanities. Whence comes this if not from toxins peculiar to the disease? How much more rational this than the theory of nervous shock whose influence is surely the result of deficient excretion; once make this free and delirium ceases, temperature falls.

Drs. Regis and Chevalier-Lavaure ask in this connection if infectious disorders are not sometimes the cause of general paralysis. Dr. Blumer, of the Butler Hospital, R. I., answers, "For my own part, I believe this opinion is not susceptible of any very great generalization, but that it nevertheless is based upon actual facts." With re-

gard to visceral disturbances causing insanity, he says: "Visceral disorders also often produce insanity. This is well known, and the earlier writers localized insanity in the liver and the bile."

Gray states that intestinal derangements often cause melancholia, and the most frequent of these intestinal lesions is a functional derangement of the duodenal region of the small intestines, but he considers the relief of these conditions will generally not be sufficient to disperse the melancholia. Of epilepsy, he says it is a fact of practical importance, and one that seems to be almost universally overlooked, that profound malnutrition may be a cause of epilepsy.

Krainski, in his study of epilepsy, says that on the days it attacks, just preceding them, the output of urea is greatly diminished. In this condition of disturbed metabolism the system is supposed to form ammonium carbonate instead of urea. This compound gives off ammonia, which Krainski believes causes the fits. Again, Mott, Halliburton and Donath believe that the alkaloid cholin found in the cerebro-spinal fluid in many cases of epilepsy, locomotor ataxia, paretic dementia, brain syphilis and brain tumor is the cause of disease in many people that are afflicted with these troubles. By injecting cholin into the cerebro-cortex of animals Donath has produced localized and general convulsions in them. By the injection of a salt solution no such convulsions have been produced. If these observations are carried on still further with the same results, epilepsy will be classed among the auto-intoxications, with the result that some antitoxin may perhaps be found to help it.

Pershing says: "Analogy leads us to believe that such terrible emotional disorders as melancholia, mania, acute delirium and transitory frenzy are forms of intoxication, although the poisons have not yet been discovered, and if the cause of any emotional disturbance is obscure we should always carefully consider the possibility of its being a poison of some kind." Lord Byron is quoted as saying: "Talk about champagne! Nothing cheers the spirit like a dose of salts," from which one may safely infer that some, at least, of Byron's melancholy moods were caused by intestinal toxæmia.

Peterson, in his third edition, says: "Accumulations of deleterious agents in the blood in such quantity as to affect the nervous system (*e. g.*, carbonic acid and the poison of diabetes and of uremia) have been long known to medical science, but the more mysterious poison produced by disease in various parts of the body by fermentating and putrefying substances in the alimentary tract

and by some of the acute infectious fevers have only of late taken an important place in the etiology of the psychoses. We do not yet know how frequently auto-intoxication from absorption of intestinal poisons determines insanity, but the facts thus far collected point to the origin of a considerable number of cases from this cause. These cases are usually of depressed type, but sometimes maniacal." "Researches in physiological chemistry of digestion, as well as observations in many pathological conditions, have substantiated that auto-intoxication from the absorption of poisonous substances generated in the alimentary canal by putrefactive and fermentative process is not only a real thing, but a frequent factor in the etiology of a number of nervous disorders, such as headache, neurasthenia, hysteria, neuralgia, and even graver maladies like epilepsy, melancholia and mania. It behooves us, therefore, in these diseases, to investigate carefully for evidence of any such cause. Periodical or constant attacks of gaseous diarrhœa are somewhat indicative of this condition. Frequently the condition of the bowels furnishes no information of the actual state of affairs. Recent researches tend to show that an excess of ethereal sulphates in the urine (indican) in connection with other symptoms is a good index of auto-intoxication."

Dr. Allen McLane Hamilton, in a paper on this subject, states that a study of the cases that formed the basis of observation by him for a year unquestionably bear out the assumption that disturbances of the gastro-intestinal tract, more often than is generally supposed, are attended by bacterial necrosis and the introduction into the general circulaion of certain very virulent toxic agents whose effects are expended mainly upon the nervous system. He says: "I think I am safe in saying that nearly all the rapidly developing confusional insanities have this explanation, and we must, therefore, be on the alert for such a cause, even when the case has commonplace features. No other alternative has presented itself so strongly to my mind as that of intestinal putrefaction, and in all the patients whose urine was examined a decided increase in the amount of indican was found even when the diet was carefully regulated."

"From the data obtained from all available sources, my own cases and others, it would appear not only that the ratio of the sulphates between themselves and to the urea, and the presence of indican in considerable amount, are indications of intestinal putrefaction, which, no doubt, influence the course of various insanities, but that

a large increase of the combined sulphates has much to do with the genesis of various psychoses." His conclusions are:

"(1) Urines rich in indican contain very little or no preformed sulphuric acid, and are toxic.

"(2) When the sulphate ratio is materially changed it is likely to indicate autotoxis in connection with an increase in the amount of combined or ethereal sulphates.

"(3) Such conditions are generally found with acute insanities in which rapidly developing symptoms occur.

"(4) Fugacious and changing illusions and hallucinations, unsystematized delusions, confusion and verbigeration in connection with insomnia, pallor, intestinal indigestion, constipation and rapid exhaustion are due to antotoxis.

"(5) Paranoic states, or those in which concepts are the features, chronic stuporous conditions, and certain forms of dementia have little to do with the formation of intestinal products of putrefaction.

"(6) Various post-febrile, traumatic, alcoholic or drug insanities are those in which autotoxis is most constant.

"(7) The variation in the execretion of combined sulphates keeps pace with the changes in the progress of an established insanity, *accès* and epileptoid attacks being directly connected with putrefactive processes."

Brunton suggests that the lassitude and drowsiness which are so apt to follow a full meal may depend upon the absorption of an excess of the normal digestive products, and so be a mild manifestation of auto-intoxication.

Most of the severe constitutional disturbances associated with gastric disorders in childhood are believed by Heubner to be due to auto-intoxication. Of the chronic intoxications of gastric origin those associated with dilation of the stomach deserve special mention. In this condition there exists every favorable condition for the formation of fermentative and putrefactive products and for their absorption. These intoxications accompanying gastric dilation are especially characterized by the periodicity of the appearance of the symptom. Among other chronic intoxications may be mentioned migraine, certain other periodic headaches and neuralgias, and possibly, too, the gastric crises of tabes dorsalis.

Dr. G. M. Dewing, Superintendent at Long Island State Hospital, King's Park, Long Island, in his report for the year ending 1902, states that in acute cases "auto-intoxication, especially from

the intestinal canal, is almost always present, and that the medical symptoms are found to be greatly exaggerated owing to a failure on the part of the organism to remove waste." He examines the blood and secretions. Nutrition is maintained by giving all the nourishment the organism can assimilate and make use of. He also gives water in considerable amount between meals; this is insisted on, and is found to be of great advantage.

Dr. H. L. Palmer, Superintendent of the Utica State Hospital, New York, says: "I think in most cases an hereditary tendency or a neurotic disposition will be found to exist in conjunction with the auto-intoxication. It is my practice to look thoroughly to the alimentary canal and relieve any and all irregularities so far as possible. There is no doubt a disturbed metabolism in many forms of mental ailment, particularly the various forms of the depressive psychoses. I do not, however, look upon auto-intoxication as the main cause in the great number of cases."

Dr. Geo. O. Welch, Medical Superintendent of the Fergus Falls State Hospital, Minnesota, says: "Speaking in general terms the larger number of our cases are suffering from auto-intoxication on admission to the hospital. I do not mean to say that this is the cause of the insanity, but it certainly has considerable effect in prolonging the unbalanced mental condition and making it more severe; for in most of the cases restoring the physiological functions to healthy action, especially paying attention to the digestive tract, so that the food is properly assimilated, will produce a marked change for the better in the patient's mental conditions."

Dr. H. A. Tomlinson, Superintendent of St. Peter's State Hospital, of Minnesota, says: "Practically every patient received in this hospital is suffering to some extent from the ill effects of auto-intoxication."

Dr. W. B. Fletcher, an alienist, of Indianapolis, Ind., says: "It is my opinion that by far the larger number of cases of epilepsy and insanity are due to auto-toxic conditions."

Dr. Max E. Witte, of the Clarinda State Hospital, of Iowa, says: "I will say that I have been convinced by careful study of many cases of insanity that the first beginning of many forms of acute affective disorders, such as melancholia and mania, often, if not altogether, have their primary inception not in the brain, but elsewhere, usually in the organs of the abdominal cavity. I have been led to this belief through the study of the emotions associated with

the functions, either healthy or disturbed, of the vital organs of digestion, nutrition and elimination, including the hemapoietic structures, such as the spleen and lymphatic glands."

Dr. T. J. Mitchell, Superintendent of the State Insane Hospital of Mississippi, says that for two years he has been impressed by the fact that quite a number of diseases are due to auto-intoxication, both mental and heart failure, and that recently he has been paying special attention to the bowels of his patients as being the medium through which is the chief source of auto-intoxication, and he hopes by close attention to derive some useful facts.

OVERSTRAIN AND EXERCISE.

The subject of overstrain, mental and physical, is such a wide one that I can only touch upon it to-night, but I have copied a list of indications which I think will interest you. Dr. Sutherland, of London, found that a change in the healthy mental tone of an individual showed itself in the development of the following symptoms:

MENTAL OVERSTRAIN.

1st. Irritability and tendency to take offense.
2d. Moroseness and silence, or fault-finding with servants.
3d. Suspicion and jealousy of best friends.
4th. Impairment of memory, forgetting hours of meals.
5th. Inattention to exercise and state of bowels.
6th. Neglect of personal appearance.
7th. Altered facial expression, notably in melancholia, with marked furrows.
8th. Prominence and brilliancy of cornea in hysterical and puerperal mania.

NOTE. Auto-intoxication will alone induce these symptoms.

SYMPTOMS OF BODILY OVERSTRAIN.

1st. Harsh, dry skin, as a rule, though sometimes perspiring.
2d. Sometimes a peculiar odor.
3d. Coated tongue, with offensive breath.
4th. Constipation and feeble circulation.

5th. Headache and pallor of face.
6th. Sexual appetite, either in abeyance or abnormally strong.
7th. Frequent suppression of menses in females.
8th. Subjective deafness or abnormal auditory sensation.
9th. Altered conversational style, and talking to one's self.
10th. Delusions and illusions later on.

NOTE. Here, too, we see the effects of auto-intoxication, and I would impress the fact upon you that in this condition there is a most marked lack of endurance, shown by disconnected thought and easily induced fatigue.

EXERCISE.

In connection with the foregoing, exercise to be productive of the best results should be without overstrain. A weak, run-down condition in a patient demands a storage of strength, that is, a saving of the little strength he may have and adding to it slowly in order to bring about a return to health. This may seem, perhaps, a trivial thing to note here, but I have too often been called upon to patch up the results where the importance of this simple precaution was not recognized.

Deep inhalations of fresh air properly and regularly taken will help in more instances than will tonics. When a patient is anæmic teach him inhalation, as few outside the medical profession understand its importance. It will enrich the blood, bring color to the cheeks and increase muscular resistance. When possible, give such a patient a hill to climb daily, instructing him to keep the mouth closed in the ascent, going at first slowly but steadily to the top. A few months of this sort of exercising will show good results, as fresh air, fresh blood, renewed strength and less nervousness go together. As for bathing, the fact that the skin should be kept clean and soft, pores open but not relaxed, goes without saying. It has been, and is now, a fad among a great many to bathe too much. To the person who is over-worked and showing some of the symptoms just enumerated under the head of "Overstrain," there is danger in the too frequent use of the bathtub or spray.

If the heart is strong and regular in its pulsing, the reaction from almost any form of bathing is a pleasure, but for those who have tobacco heart, or who are breaking down,—the heart's action indicating nothing more than irritability,—the cold bath or spray, or

much bathing of any sort, becomes a source of danger. Leander swam the Hellespont, 'tis true, but he didn't get back.

The effect of any kind of bath should be watched closely, and if there is repugnance, dread, chill or weakness after, cut it out. Giddiness, faintness, palpitation, loss of physical energy, whether induced by overstrain or old age, must be carefully guarded against. The late Mrs. Gilbert, as "Granny," may be cited in this connection.

CONCERNING THE TREATMENT OF CEREBRO-SPINAL MENINGITIS.

W. J. MARTIN, M. D., PITTSBURG.

"As an epidemic of spotted fever,or cerebro-spinal meningitis, is threatened the inhabitants of this city, Supt. Moore, of the Bureau of Health, yesterday decided to send Dr. E. G. Watson, the city bacteriologist, to New York to study the treatment of he disease in that city. As yet the medical fraternity has discovered no definite treatment for the disease or any means of checking the spread of it. The city physicians of New York are devoting much time and study to the malady, and Dr. Watson will work in conjunction with them to learn of some treatment with which to combat it. It is said the physicians have learned that the germ is inhaled, but that is about as far as their knowledge of it extends." From the *Pittsburg Gazette*, April 30, 1905.

New York, May 5 (special). "At the conclusion of the meeting of the Cerebro-spinal Meningitis Commission at the health department building this evening, Dr. Darlington announced that the Commission had concluded that the best treatment for cerebro-spinal meningitis was *fresh air*. Windows should be kept open day and night. Dr. Darlington further said it was the belief of the Commission that the disease was brought on largely by a lack of fresh air. Epidemics of cerebro-spinal meningitis, he said, had occurred during especially severe winters, when windows were closed fast, and people went out little in the open air."

"Dr. Geo. L. Peabody, at a recent meeting of the Academy of Medicine, of New York, said in reference to the recent epidemic of cerebro-spinal meningitis: I am compelled to make the humiliat-

ing confession that we have fallen into a trap without adding anything to our knowledge. I was never more painfully impressed with our helplessness in treating cerebro-spinal meningitis. It was the severest epidemic of the disease that we ever faced, and in our helplessness I think we were justified in trying diphtheria antitoxin. In Roosevelt Hospital we gave this treatment in twenty-two cases, mostly young children. The meningococcus was found in every case but one. In each case the fluid was removed by spinal puncture. Eleven died; only one case showed any effects from the antitoxin, a girl, who ultimately recovered. The mortality will go far beyond fifty per cent."

In comparison with the above I offer the following from page 208 of Nash's Homœopathic Therapeutics, under Cicuta virosa: "With this remedy, cicuta, the patient is thrown into all sorts of odd shapes and violent contortions; but one of the most invariable is the bending of the head, neck and spine backwards, opisthotonus. It is on this account that it is used in the cure of cerebro-spinal meningitis."

Dr. Baker, of Moravia, N. Y., cured, during an epidemic of this terrible disease, sixty cases of all degrees of malignancy without the loss of a single case.

Comment, ladies and gentlemen, is unnecessary. My own experience, and I have treated many, very many cases, has been that under careful Homœopathic treatment these cases make as prompt and complete recovery as any other of the acute infectious diseases, such as scarlet fever, typhoid fever, small-pox, diphtheria, etc.

DISCUSSION.

Dr. M. A. Wesner: I shall endeavor to talk to the point, because I use pointed remedies in a pointed kind of way for a pointed purpose. I have practiced thirty years. The first year I practiced allopathy. During that time I lost one case of cerebro-spinal meningitis. That is the only case I ever lost. I have treated case after case since then. I have had them with their heads bent backward, resting on the occiput and heels. I have had their arms bent in that way (indicating), and their lower extremities in the same way, and every one recovered. The remedies I used are Cannabis Indica, Belladonna and Rhus toxicodendron, and I have not lost a single case since I practiced Homœopathy.

HYPNOTISM (?) AND HOMŒOPATHY.

Z. T. MILLER, M. D., PITTSBURG.

"You are a d——d fool. Your medicines have nothing to do with it. You hypnotize your people."

The man who hurled that anathema at me had once written a book; whether in answer to the prayers of his enemies I cannot say. At any rate, the presumption is that in that book he told the truth, and it may be accepted as evidence that he could do so. It may, further, be inferred that when he said I was a d——d fool and a hypocrite that he spoke the truth; and that is why I shall attempt in this paper to demonstrate the proposition laid down by him that a fool and a hypocrite—although incidently giving so-called homœopathic remedies—may, to his own satisfaction and the equal satisfaction of his patients, see disappear certain abnormal physical conditions that were very annoying. I have been reminded on several occasions that men who report such astonishing cases by high potencies are liars. A few days before coming to this meeting I was reassured of this prevailing opinion when the gentleman to whom I stated I was going to report these cases here said to me, "Now tell the truth!"

It is not customary to give full names of persons treated. I will say, however, that anyone desiring the name and address of the people herein mentioned can have them on application, with one exception, that of little Nellie—she's dead.

Young S. had enlarged glands on the left side of his neck. A specialist had made a specialty of failure to hypnotize them away for over a year. One of my "runners" persuaded the father to let me "work on him." I began by assuring the father that I did not know what could be done. I made this statement in order to place the proposition beyond the line of "Christian Science" and "suggestation" and bring it strictly within the limits of "Hypnotism" (?). Right here it may be necessary to explain that my hypnoic methods are entirely of the "sub-conscious" kind. I know aboslutely nothing of my efforts in that direction. I did not glare at the victim and render him dopey, nor resort to any of the mysterious "incantations," "passes," etc., etc., that my brother "operators'" use in placing the patient out and in. I impale him by making a rather minute

inquiry into the symptoms he may have, his family history, his habits, etc.; and by the time I get through with this part of the process he is perfectly pliable and helpless. I now change the tactics. I take down a certain "Condensed" tome, the Law and the Prophets. This is very effective. It gives the victim the impression I'm a "Seer," and an overwhelming awe spreads over his countenance. In this state you could make him do anything—that he wanted to do. Of course, it will be understood that all this search for drug symptoms to correspond with the symptoms of the poor unfortunate—so lost to health that his glands even became hardened—had no other purpose than to supplement the all-sufficient power of hynotism (?), with a dash of "unconscious" deception by way of giving a little Calcarea fluorica, 12, four times per day. For the next two weeks the boy received "absent treatment," that is, he stayed at home, never touched the "lumps" (which, by the way, he did continually for a year; from Iodine), and then called again. The glands were about the same. The hypnotic lay, with Calcarea fluorica as before, was continued for two months. At this time the skin over the largest lump began to get red and became painful. A questionable proceding was now indulged in. While the hypnotic spell was continued the ally was changed from Calcarea fluorica to Hepar, 30, with more absent treatment for two weeks, with little change. Now Hepar, cm, one dose per day, was given for a week, when, lo! there broke out all around that child's neck at least fifty pustules of varying size. Two in particular became as large as filberts and discharged freely. Menwhile the skin above the glands ulcerated, leaving beneath spongy and sloughing tissues, which gradually disappeared, leaving the neck nearly equal on both sides. Silicea, 200, in daily doses, has completed the cure.

Miss ———, 10 or 12 years old, had gone the rounds of many of our holy profession, and some that according to the code were unholy. None of them, however, were hypnotists. Some probably were fools. This child's trouble was a piling up of granulations that looked like a small teat one-quarter inch high by one-quarter inch wide at the base. This teat-like growth was at the root of the big and next toe of the left foot; beneath it there was a moveable mass of small dimensions. This thing had been probed, cauterized, doped with salve, poulticed, in fact, everything known to science had been done (so said the mother) to rid that child of that growth of over a year's standing. It was not painful. Her

mother said the child ran something into her foot a number of years before. I opined that there was something in there that wanted to come out, so issued the hypnotic decree that they were not to touch that teat with anything whatever, simply let it alone, let the child live her ordinary life and take one powder of Silicea, 200, every seven days. When the four weeks were up there was nothing left of the teat save a scar.

Be it remembered that Silicea, 200, was used as an adjuvant, and calling myself a homœopathic physician and knowing that all that pertains to the great field of medical learning is mine by tradition, by inheritance, by right, I did not hesitate to go out of the straight and narrow path of hypnotism and use Silicea.

A gentleman, sent me by a woman who wanted to marry him, was affected by epilepsy. He called it his "spells," and a friend of his who saw him in one called it a "fit." It was epilepsy all right. He had been having several seizures a week for years. Some "Lady Doctor" who cured fits was giving him her cure by the pint to no purpose except to "knock out his stomach," as he said. Without promising, suggesting or any hocus pocus, I began to play the fool hypnotic game on him by taking his symptoms, even had him write to his mother to get a detailed account of an eczema that he had when a child and for which "something was done." The contents of the letter, coupled with the symptoms the man himself gave, decided me to adjuvant the hypnotic business by giving him one dose of Sulphur, cm, so-called, with Saccharum lactis absent treatment for a week. This treatment has continued for over one year now and he has had but one "spell" since he began, and that was early in the treatment. The treatment has been broken on three several occasions, when a dose of Belladonna, cm, was given for a cold, as he called it, one dose at a time. When he comes now he says, "I am feeling well," and he looks it. And the woman married him.

These cases look to me as though the means employed had something to do with the cure—whether the fool hypnotism or the adjuvant homœopathic remedy played the primary role does not concern me particularly.

I have mentioned the potency of the adjuvant, so-called homœopathic remedy, for the reason that at the last meeting of the American Institute of Homœopathy, at Niagara Falls, the Chairman of the Bureau of Materia Medica offered a resolution for adoption in

which the Institute was asked not to recognize as a homœopathic remedy anything potentized beyond the demonstrable divisability of matter,—in other words, anything beyond the twelfth potency was not to be considered as medicine by the Institute. The discussion that followed revealed that this resolution was offered as a kind of sop to our allopathic friends and to keep us in line with the scientific advancement of the day. The late Conrad Wesselhoeft took the stand in defense of that resolution, but J. B. Gregg Custis, of Washington; C. H. Allen, of Chicago; Dr. Gilbert, of Washington, and others rose to the occasion and voted it down overwhelmingly. Of course, the last named three gentlemen are not fool hypnotists, but they do stumble against pretty good Homœopathy and seem to move the earth when they try.

The thing that amuses my hypnotic sense is the strenuosity of some of our house to hedge toward the genial gentlemen who declare the whole lot of us to be d——d fools, and especially why should we try to catch them with a hook baited with the scientific dose when they have ever failed to accept the real homœopathic principle of Similia? Better wheel them into line with the *law* then *dose* them.

Our Massachusetts friend seemed much afraid that we would do something that would make us ridiculous in the eyes of the "physicists," as he called them, as if Hahnemann had not antedated them in some things a hundred years ago. There are some, however, such ultra "physicists" that they prefer the practice suggested by the manufacturing chemists, who forever have their pins knocked from under them—to stable unchanging law and its application promulgated by Samuel Hahnemann.

Now, there was poor Joe. Joe was a little boy with big, black eyes, skinny and as innocent and interesting as Tiny Tim. Joe had always been a patient of mine until a doctor came to Joe's father's church. Then, for a while, Joe fell into the medical net of the church doctor. One day Joe, for some unaccountable reason, began to bleed at the nose, and Joe did bleed. The church doctor gave Joe much Ergot and plugged his nose, but Joe's blood persisted in leaving his body via the nasal openings. As a consequence Joe began to speak in whispers and look very much as though he was all out, so pale and clammy was he. I supplanted the church doctor, but not the church. Seeing Joe's blood thin and uncoagulable, I removed the plugs, gave him some Crotalus, 200, and a hyp-

notic benediction, which brought Joe around all right. Very recently Joe seemed to be going to the bad with a cough and hectic after measles. Calcarea phosphorica, 30, reinstated Joe on the first base of the Brownstone Bantams, composed of boys four to six years old, any one of whom knows more about base ball than Barney Dreyfus himself.

Then came Mr. R. Old Uncle Ned was not in it with Mr. R. Ned had no hair on the top of his head, but Mr. R had no hair "nowhar." He was about as bald a specimen of humanity as was ever. He and hair had parted company for a period of three years. He denied any initial infection and said if he has syphilis he had inherited it. He lived in Allegheny. How he happened to blow to the South Side only the ill winds know. At any rate, he had syphilitic rupia, sore mouth, cracked corners of the mouth, sore anus and all the frills of syphilis. Mr. R. wore a wig. During the treatment, which consisted of Mercurius, Nitric acid and Syphilinum, Mr. R. grew a very respectable quantity of hair on his head, so much so that Johnnie got his hair cut once since and the wig has been discarded. Even the mons veneris has regained dignity to the extent of facing the marriage contract all there. I am wondering whether the hair will hold fast. If I am not smothered for giving this away, I will report on that point later. Otherwise Mr. R. is very well.

Then comes little Nell. Poor Nellie was one of those creatures that to look upon shake your faith in the Divinity that shapes. Her life was rough-hewed, indeed. Her hands and feet were distorted by sycotic rheumatism. Her heart leaked from an old sycotic endocarditis. She was epileptic, having six to ten seizures in a week. She had parenchymatous tonsilitis that at times took on the acute form. It was one of these attacks of quinsy hat brought me to Nellie. The abscess broke next day, but a few days later I was called and found Nellie with pneumonia and retention of urine for twenty-four hours. While catheterizing her she had an epileptic convulsion, the second that morning. Spigelia, 200, was now given Nellie to relieve the embarrassed heart and pains. In twenty-four hours she was painless. The left apex was dulled, giving all the signs of pneumonia. The day following Phosphorus was substituted for Spigelia. A strange spell came over Nellie. She sang in a weak, piping voice, the burden of her song being that she had been born again, was now a good girl; she had a new heart and no

pain, she could lie low in bed, but her breathing was largely abdominal. Her cheeks were flushed, her lips dry and parched, her finger nails blue. Urine retained. In this condition of approaching dissolution I determined to give Nellie one dose of Medorrhinum, cm potency. Next morning I learned that Nellie sang all night "Nearer, My God, to Thee." The watchers thought she was, but the pulse was eighty-eight, soft and jerky; respiration less labored; cough very loose; conscious; urine retained; temperature 101 2-5. At 6 she quieted and slept. In general, Nellie was better. The remedy was not repeated. For three days Nellie was allowed to rest in expectancy, the while being able to pass water and have evacuation from bowels knowingly. Now there was rung another change in Nellie's miseries. She broke out from head to foot, particularly on the face and chest, with a red, raised, round eruption that had a minute dark speck in the centre. Some of them coalesced, creating a large irregular blotch, itching slightly. Measles prevailing, I thought Nellie had caught on but she lacked the catarrhal symptoms. This rash continued for five days, gradually fading, the while Nellie's temperature dropping to ninety-nine and such general betterment that I did not see Nellie for a number of days. When I was called again found her temperature 103+; rambling, delirious; complaining of burning in spots here and there. The mother told me that the night previous Nellie had a dozen epileptic seizures and had had two that morning. The upper portion of the right lung was solid. Next morning a sturdy German gentleman called into the office and said, "Nellie is dead." God was good!

HOMŒOPATHY IN CHRONIC DISEASES.

CHARLES M. RICHARDS, M. D., READING.

We are all well aware that the majority of the sick are suffering from chronic diseases of various forms. Our Works on "Practice" number their pages into the thousands endeavoring to name and classify the many symptoms and pathological changes that are discovered in this poor body of ours. In spite of the fact that we have hundreds of so-called diseases given their respective names, yet the majority of our patients present such a combination of symp-

toms that it it almost impossible to make head or tail of them, let alone trying to give them a name. In these cases with a multitude of symptoms which portend serious results, our patients are certain there is some serious ailments, and we are requested to make a thorough examination of them. This we do, and what is the result? Absolutely nothing of a pathological nature. Is there no sickness here? No disease of the body? Too often such a patient is sent away with some simple tonic, and the doctor thinks that he has another hysterical case to handle. He continues to treat his hysterical (?) case for a long time; some weeks she feels much better, this he thinks the result of his treatment; then she becomes worse again, and he is puzzled to know what to do. This continues for some months or a year, and, although frequent examinations are made, there is no morbid anatomy detected; therefore, our old school brother and many Homœopaths know not what to do for the patient. The time comes finally that, after one of his examinations, the wise (?) doctor turns to his patient and says: "Now I know what ails you, you have Bright's disease, or consumption, or valvular heart disease, or cancer, or any one of the many classified pathological states."

Now our brother physician is happy; he has found a name for the disease. Now his patient can tell her friends, who always are anxious for a little gossip, exactly what her trouble is. Of course, knowing the name of the disease it is now very easy to make a prescription, and in a longer or shorter time the disease may be cured (?), that is, it disappears, but unfortunately the patient seems now to have a new disease, which, in turn, requires attention. So much for the disease, but how about the patient? Well—the last state of that person is worse than the first

The old school cannot, and many do not, deny their inability to cure a patient suffering with a chronic disease if there have been anatomical changes It is to Homœopathy alone that such patients can look for a thorough and radical cure She, alone, has given us the means of accomplishing such wonderful results; yet how many of us fully realize this? How many make themselves intimately acquainted with Hahnemann's Chronic Diseases and our full Materia Medica so that they may be enabled to accomplish such grand results? As a simple illustration, consider varicose veins. What has the old school to offer? The elastic bandage and the dissecting knife and some remedies borrowed from us. Whereas,

Homœopathy every day cures simple and serious cases with such remedies as Pulsatilla, Hamamelis, Fluoric acid, Æsculus, Collinsonia, Nux vomica, Sulphur and others.

But what I want to call your attention to is the fact, as mentioned that there exists a period in all chronic diseases which are capable of receiving a definite name owing to the morbid anatomical changes present; there exists a period, I say, when no fundamental disease is discoverable. The patient alone is sick, not the patient's body; but the patient herself, and to her assistance we must come with our "similarly acting drugs." We are tempted to neglect these patients and merely to treat the acute manifestations which arise from time to time. This is a mistake, as almost any system of medicine will relieve most acute diseases, but to Homœopathy alone belongs the honor of curing the chronically suffering patient.

The following case will illustrate these few remarks: On April 23, 1902, Miss B., aged 20 years, consulted me. She has many freckles, hair and eyes to correspond, and looks rather sallow. She is a house servant. When young she had typhoid fever and scarlet fever, which weakened her eyes. Eight years ago she had been vaccinated, and was quite sick at the time. Also a few weeks ago was again vaccinated, but it did not take. The menses appeared at 14 years of age. They are always late. Two days before the time there is a dull aching pain in both tibiæ and up the back to the middle. A constant bearing down sensation in the hypogastrium. Flow dark, sometimes clotted, lasts four or five days, then she feels well except that she is nervous and weak, with dizziness and blackness before the eyes. Pain occurs in both groins as if strained; tongue coated white with light edges. Before the menses there is frequent urination; the urine containing a red, brick-dust like sediment; also acne appears on the forehead and lower jaw until after the menses cease. She always feels worse about the time of the menses. Taste is foul; coppery. She drinks much coffee. The feet burn much at night Flying stitches in the region of the heart only during the day. Shortness of breath on ascending the stairs. Between the menses leucorrhœa, thick, profuse and so acrid that it rots the clothing. Nausea, which is worse in the morning. Appetite is variable, becoming excessive before the menses. During the menses she craves sour things. There is bloating of the epigastrium relieved by tasteless eructations. When stooping shortly after eating sour water rises into

the mouth. Thirst is excessive for large quantities of water. Urine upon examination showed about double the normal quantity with sp. gr. 1012, an excess of total solids and a diminution of urea.

Of course, you all can explain her case, but who will give it a *definite name* that shall cover all points. As yet there is no definite pathological change sufficiently great to be diagnosed and named. She has dysmenorrhœa, so we should treat that. Then there is a chronic indigestion which requires another remedy, but what about the sweaty feet and the other odd symptoms? Is it any wonder that the old school resort to polypharmacy? To me the first indication was to antidote the last medicine she had received. As mentioned, she had but recently been vaccinated, but it did not take. As the late Dr. Burnett has shown us, when a vaccination does not take, it, in the majority of cases, is due to a weakened power of resistance, and the poison causes changes within the body, therefore it should be antidoted. Thuya 60x was given, four powders, one to be taken each week, and placebo three times a day. On May 3d she reported some improvement, especially of those symptoms which occurred in the morning (which proved the good effect of Thuya as morning aggravation is quite characteristic). On May 14th she contracted an acute coryza with involvement of the entire respiratory tract. Her general condition continued to improve. Arsenicum album 12x cured the cold and continued the general improvement, so that by May 26th she could report herself better in most respects excepting the heart and menstrual symptoms. For the first time she mentioned some warts on the right hand, horny and beginning to grow. She received Sulphur 60x. On July 29th better in every way, but feels drowsy, tired and indifferent. Pain in the region of the spleen and a crop of pustules appeared and disappeared in a few days. Warts no better. This time she received placebo. August 27th somewhat better, but had practically come to a standstill. Sepia 60x was given. I heard nothing from her until seven months later (March, 1903), when she reported that she was entirely cured, and her friends remarked on her improved external appearance. She continues well to this day.

I believe that the law of Similars and Hahnemann's discovery of the cause of chronic diseases alone enabled me to cure in six months or less that from which she had suffered for six years, and who can tell what pathological changes would have taken place to have rendered her case almost incurable and her life miserable.

The strength of Homœopathy lies in its ability to cure chronic diseases. We know that Homœopathy is the best system of treatment for acute diseases, but we also know that the majority of acute ailments recover without any medicine if properly nursed, and many are sufficiently relieved by measures other than Homœopathic. With chronic diseases it is quite different. They never cure themselves, and there is no method of cure for them save that pointed out by the immortal Hahnemann. How few are the physicians who know anything of the treatment of chronic diseases! Then why not read what he has to say; discard his theories if you wish, but accept his facts and follow his instructions until you are capable of doing better. Nothing will bring the true physician greater pleasure and happiness than the thorough eradication of disease from an individual and to know that the good done will be carried down to the third and fourth generations.

DISCUSSION.

Dr. E. M. Gramm: It seems to me this paper is one which contains many very important truths, and that we, as a society, should dwell upon those truths with a great deal of force. There is no doubt but that the majority of our physicians are wandering far and far enough away from the Homœopathic treatment of their patients, and many cases come to us where obscure and long-continued symptoms, have rendered the patient sick, and yet where we cannot make a distinct diagnosis of a named disease, for the simple reason that there is no specific disease present, such as Bright's disease, or tuberculosis, or something of that kind, but we have a patient who enumerates symptoms that indicate a sick man or a sick woman. In those cases the physician, and many times a Homœopathic physician, endeavors to cure the symptom which the patient picks out as the one he or she wants to have cured. For instance, they come to me and they have a skin manifestation, and that is what they want cured, and from day to day they watch that condition, and possibly it does not improve. A proper prescription for the totality of that patient's ailments builds the patient up and makes him a more nearly well person, with the skin disease persisting, just the same as it ever did, for the reason that the skin disease is the unyielding portion of the disease, and the symptoms, which can yield more readily by reason of being less firmly seated

upon the economy, gradually improve. I recall at the present time a man who came to me for eczema of the legs. I treated him for quite a long time. I explained to him just exactly the course he would need to go through; that he would need to be made a well man before he could expect to be rid of the skin disease. After I had treated him for a long while the skin disease improved somewhat, and after passing through a very changeable and ugly winter, during which he, as a rule, would contract heavy colds, so much so that he dreaded winter to come, he said to me: "Doctor, you have not cured my skin disease, but I am to-day a man better in health than I have been in twenty years." Now that man was being cured, and, as I say, the majority of us when a patient comes in who has a chronic ailment, let the patient pick out the series of symptoms that are to be cured. Then we peg away at them, and the patient comes in after having been prescribed for and says: "Doctor, I am no better." We take the patient's word for it, and we give another remedy, instead of examining him carefully and seeing that the symptoms that should begin to improve first are improving, and that the patient is on the road to health; or, on the other hand, a patient comes in and says: "Well, I may be a little bit better, but I get awfully discouraged. Sometimes I seem to be worse than ever I was." We do not examine that patient to see whether the patient is decidedly better than he was before but we take the patient's word for it, or feel that the patient is getting impatient at the slowness of the cure, and we change our remedies. We tell him, "We will give you something else" for the sake of holding that patient. It seems to me we, as Homœopathists and physicians as a class, do not recognize the fact that chronic diseases must be cured slowly. They cannot be cured rapidly; and when certain symptoms are present, when they are painful, when they are insistent, we take the patient's impatience as the guide for whether we had better keep on with our remedy or change it. It seems to me the study of chronic diseases is, after all, the important study that physicians should make, and the man who is successful in curing a chronic disease is the very best doctor and must be the best Homœopath that can exist.

Dr. M. A. Wesner: I think this paper has the true ring of thorough Homœopathy. I want you to remember, however, that I am not a Homœopathic graduate. I came from the old school, the orthodox Jefferson, a good many years ago. I was dissatisfied with

the treatment. Of course, then they had no antitoxin, but I was dissatisfied with their other treatment and took up Homœopathy. I never graduated in Homœopathy, although I attended some lectures on Filbert street in Philadelphia; but I was going to say it is a very good plan for any physician to be able to name the patient's disease. It helps him greatly. If you cannot just put the exact name call it something. It will give satisfaction to the patient to know that those symptoms are giving him some disease. If you cannot get it exactly, come about as near as possible, because if you do not he will go to some allopath who will give it a jaw-breaker, and your patient is gone. When these chronic patients come to me I do not always treat them with high dilutions. I have then come back, and make a very strenuous effort to have some improvement by the time the patient returns. I have them come back in a week or two weeks, generally in one week.

Speaking of vaccination reminds me of a case I had a few years ago. A young lady, a school teacher in the city of Pittsburg, came to me with chronic hoarseness. She had seen two specialists with no benefit. She got tired of them. At first I could not tell exactly what the cause of it was. I gave her Causticum. It gave some relief, but it did not cure her. I then gave her Phosphorus. Still results would not come. She was relieved for a while, but the hoarseness returned. Finally I gave her Thuja, 1000, every ten days. Inside of a month—I think she took three powders—she had no more hoarseness. I think she has none to this day. That hoarseness, I understood when I questioned her, followed vaccination. She was vaccinated twice and the second time it took with a vengeance. She was laid up I do not know how long, but the vaccination left behind it the trouble that was removed by the Thuja. To this day she has no more hoarseness. You should always give your patient relief the first time they come. If you do not succeed you will not have your chronic cases very long; they will find some one else.

Dr. Julia C. Loos: Dr. Richards has given us a very good illustration of patience in chronic diseases. The study of chronic diseases, as Hahnemann has given it, will be very much better understood if supplemented witht the study of the deep acting remedies. The study of the one will help you to appreciate the study of the other. One very important thing has to be taken into consideration

which is often lost sight of, that is, the whole history of the patient's past in connection with the condition that the patient presents at the office, together with the patient's condition presented at different times on returning for further treatment. Any chronic treatment which is carried on without a full understanding of the progress forward and backward of the expressions, that is, the symptoms after they have been absent for a while in one part of the body or another, means a great deal to the physician who understands the nature of chronic disease. If the physician undertakes to change the remedies when symptoms are going away, in accord with the ideal cure, that is, in the reverse order of their appearance, he is going to mix up his case, whereas if he understands just what does mean progress towards cure and progress backward, he will be able not only to help the patient more but to make him more satisfied by explaining exactly what the return of those symptoms mean. The physician must understand, and very often it is necessary to make the patient understand, that the appearance of certain symptoms does not mean that he is worse. It very often means that he is better. That is very important in the consideration of chronic disease.

Dr. H. M. Gay: Far be it from me to criticise this most excellent paper in so far as it relates to the cure of chronic disease by Homœopathic remedies. It seems to me that the great glory of Homœopathy is its ability to conquer these stubborn, chronic, long continued conditions, but there was one statement that it seems to me we can hardly let go without being refuted, and that is, that a large percentage of our chronic cases come to us with conditions that cannot be diagnosed, that is, that cannot be given a definite name. It seems to me that is not a fact, and that if we take that view of the subject we are apt to get careless in our diagnoses. It seems to me that is a most important thing. In my short experience the cases that have come to me from other physicians, which have not been very numerous, perhaps, almost invariably came from a failure in diagnosis, not a failure to give relief in a short time, but the fact that the physician had failed to diagnose his case. I call in mind one case in which the patient had been treated for some time for an eruption on the face which had not been diagnosed, but simply explained to the patient as an outward manifestation of a chronic condition, a great many symptoms having been taken into consideration, which was promptly cured by soap. A scab had

never been washed off. The case had been going on for a good many weeks, and it was promptly cured by green soap and water.

DR. J. D. KELLER: I am doing work in chronic cases, and I find that in many of them it is immaterial whether you diagnose it, if that is possible. Many times it is not possible, but if you take the symptoms and cure your patient, they will not pay much attention to your diagnosis.

DR. C. M. RICHARDS: I find the difficulty in treating chronically sick patients is that it takes time to cure them, and you must positively gain their confidence in the beginning or they will not stay with you. If you treat them and say they will notice improvement in a week or ten days you may disappoint them. It is necessary to allow months, and sometimes years, of treatment. I know a case where a mother suppressed acute eczema of the forearms during pregnancy. The child did not develop it until eighteen or twenty years of age. She has had it eight years, and is getting better. She has been treated for the last seven or eight years.

Dr. Gay either misunderstood me or I created a false impression. My paper was intended more to bring out the point that many cases come to us with symptoms before we can diagnose them as a certain disease. That is, the time we should give Homœopathic remedies to cure the case, before you can diagnose definite pathological changes having taken place in the body. Even afterwards I know by my own efforts in Homœopathy that we can cure disease in which pathological changes have occurred.

THE MODERN VS. THE "OLD-FASHIONED" METHODS IN THE DIAGNOSIS OF PHTHISIS PULMONALIS.

EDWARD R. SNADER, M. D., PHILADELPHIA.

It appears to me to be about time we "took account of stock" concerning the relative value and relationship of the several methods employed in the diagnosis of phthisis pulmonalis by men acquainted with the real difficulties attendant upon the diagnosis of that affection particularly in its earlier stages. It will probably be readily conceived that the various methods are not of equal value. It would seem to me, therefore, it would be wise for us to give the

relative relationship and value careful, practical consideration Since the bacteriological diagnosis is relatively so much easier of performance, requiring far less technical skill, and withal, being to many the more fascinating of the methods, and apparently more in accord with the trend of modern medical diagnosis than the older methods of what has been known as "physical diagnosis," this consideration of methods is, perhaps, the more necessary.

A consideration of the factors involved in a solution of the problem of the selection of the method of diagnosis of so common a malady as phthisis pulmonalis is of immense practical importance, particularly to our younger men, to many of whom the bacteriological method is so satisfying and the acquirement of skill in the more ancient ways so exceedingly difficult, time-consuming and trying.

This paper will offer nothing whatever of interest to those physicians, if physicians they be, who make their diagnosis of pulmonary maladies from the symptoms alone, asking and receiving no aid from either percussion or auscultation or from microscopic findings. That sort of diagnosis (that is, one made upon the presence of a significant and suggestive group alone) is so abhorrent to men who are in search of positive information, information as decisive and unequivocal as science can make it, that this slip-shod manner of doing things diagnostically is entitled to no further consideration, for such symptomatic diagnoses are always "uninspired" guesses, and that they can only be guesses when the case is beyond the possibility of any but palliative therapeutics. But I do want to talk to those practical physicians who care not only for diagnosis for the "science" of it, but for the firm grasp on the therapeutic and prognostic situation which is given alone by a rational diagnosis.

Among the older men, skilled in the methods that are unfortunately tending to become "old-fashioned" among those who have never really acquired a practical working knowledge of the value of inspection, palpation, percussion and auscultation, these latter modes of interrogating the thorax were, in an overwhelming majority of instances, equal to the task of diagnosing phthisis pulmonalis at an early stage. While these measures were quite equal to the task of diagnosing tubercular lung maladies, these skilled men nevertheless gladly welcomed the new light thrown upon the subject of diagnosis by the findings of bacteriology as a further means

of rendering their diagnoses made by the older methods still more positive. These same men, however, regret to see a growing tendency to relegate these effective means to the background in favor of the far less positive methods of bacteriology. Let us not, however, be misled as to the real state of affairs, because the older methods are cumbersome, difficult to acquire and time-consuming, and consider the more easily mastered findings by the microscope the more certain and decisive diagnostically. A very little consideration, indeed, will show the falsity of such a position, and real knowledge concerning the diagnosis of this malady will be hampered and hindered ultimately by the adoption exclusively of the merely bacteriological method.

Whether the tubercle bacillus is, or is not, the cause of phthisis pulmonalis has nothing whatever to do with the diagnostic value of the discovery in sputa of that micro-organism Practically, it is enough to know that the tuebrcle bacillus is found in connection with lesions we clinically call tubercular, and its presence in such lesions makes it of value in diagnosis, whether the disease is, or is not, caused by the bacillus of Koch. The value of the bacillus diagnostically, therefore, lies altogether in the closeness of association of the bacillus with the tubercular lesion. How close this association is will be developed later, but we must certainly recognize that upon the closeness of the association its whole value in the diagnosis of pulmonary phthisis depends. Practically Koch's bacillus is not always found in connection with lesions we know to be tubercular, or that pursue the same courses, clinically, that diseases do which show the tubercular bacillus. In acute miliary tuberculosis affecting the lungs as a part of a general tubercular process, or existing separately, it is well known to all clinicians that the bacillus, if discovered at all, is found so late in the progress of the case that the malady has long before been diagnosed by other means. That the bacilli are not always present in the sputa of patients living or dying with lung tuberculosis is, of course, against accepting its absence as positive evidence that no disease of a tubercular character is present. The absence of the bacillus, then, does not positively settle the diagonsis as against the presence of the disease. Of course, it is perfectly evident that the germ may be in the materials derived from the chest by the act of coughing, and our technique be not sufficiently developed to discover it, or we may not have secured the sputa from the really affected area, or there may

be no sputum, or none obtainable that is "representative," and there are many other obvious reasons why we do not always discover the micro-organisms in the sputum of a phthisical patient. In many instances, indeed, we are reasonably sure that the bacilli are "back in the tissues," setting up their peculiar havoc, but have not yet "broken through" the mucous membrane, and thus become enmeshed in the morbid material of the sputa. Whatever the explanation (and many more "excuses" might be added to those already given), certain it is that there are undoubted cases of phthisis pulmonalis, observed over long periods of time, in both private and sanitarium practice, in the care of absolutely competent clinicians, in which the tubercle bacillus has never been found in the sputum of patients who were unquestionably tubercular, after repeated, regular and exhaustive examinations. Besides, the purely microscopical method is dependent upon the presence of sputa, and a certain number of adults, most infants, and many children, do not have sputa available for diagnostic purposes. It is true, that in children by a trick, which in some cases amounts almost to traumatism, you may obtain some sputa, but it is not likely to be "representative." Here, again, if sputa be obtained, a negative finding does not exclude disease of a tubercular nature. In this connection, too, think of a man waiting for the sputa before he makes his diagnosis. Think, too, of the number of patients in which this waiting for a bacteriological diagnosis would have to be practiced, and with such thinking one of the limitations of the exclusive method of diagnosis by the scope becomes evident, much to the disparagement of that means.

From the standpoint of practical diagnosticians, then, we cannot affirm that we have any right to erect the tubercle bacillus as the sole or the final arbiter and judge in the diagnosis of a lung lesion. On the other hand, is the tubercle bacillus, when found in coughed-up sputa, absolutely diagnostic of active tuberculosis? Hardly. Think for a moment of the numbers of cases of cured tuberculosis annually being discharged from the sanitariums, especially devoted to the treatment of pulmonary tuberculosis, their sputa still containing tubercle bacilli. These cases were clinically cured. Aside from the light which this fact throws on a certain phase of this subject, there can be no reasonable doubt but that the tubercle bacillus may be accidentally present in the sputa of individuals not suffering from clinical tuberculosis of the lungs. We have, fortunately or

otherwise, some interesting parallels of this fact in the not infrequent discovery of the pneumococcus, of the Klebs-Lœffler bacillus, and of other micro-organisms, pathogenic in nature, in the sputa of individuals presenting none of the clinical phenomena ordinarily found associated with particular micro-organisms. In other words, the subjects with pneumococci in their sputa did not have clinical lobar pneumonia, and did not subsequently develop it, and those with Klebs-Lœffler bacilli in their sputa had no diphtheria. This latter fact was demonstrated time and again in the city of Philadelphia during the many diphtheria epidemics to which that city has been subject, and also by the investigation of the sputa and nasal discharge of patients visiting the nose and throat department of a dispensary for the treatment of all manner of nasal and laryngeal diseases in which the Klebs-Lœffler micro-organism was found in an enormous number of throats without any of the clinical phenomena of diphtheria. I think no reasoning man will accuse me of attempting to manufacture evidence or of splitting hairs over a theory when I think it is reasonable to suppose from these well authenticated facts that the tubercle bacillus may often be present in the sputa of patients by accident, and that many of these patients are not suffering from, and do not, and have not, suffered from clinical tuberculosis. The tubercle bacillus is in the sputa it is true, but that fact alone is not necessarily evidence, certainly not indubitable evidence, that the germ has set up its peculiar havoc in the lungs. Its presence in the sputa is diagnostic of its presence in the sputa, if you will permit the phrase, but its presence does not always of necessity imply that the subject's lungs are already tubercular, and that the discovered bacillus came from the affected area.

The tubercle bacillus, then, is not constantly present or discoverable in sputa derived from lung lesions unquestionably tubercular in character, and, therefore, its absence is not conclusive proof that no tubercular lesion is present; and, further, when present, the bacillus is not an absolute, an unequivocal, a pathognomonic sign. It is true that both the extremes of statement are rarities, diagnostically, but they are sufficiently frequent to warn us not to fall into the error of making our diagnosis like machines, without mixing a little brains in the problem, and without questioning every single factor that goes to make up the ultimate diagnostic conclusion, with all its weight of weal or woe. Rare or frequent, this aspect of the subject has its practical value, for, if the presence of the tubercle bacillus

were pathognomic, we would have made a distinct and positive stride toward the correct diagnosis of phthisis pulmonalis; and, if it were always present in tubercular lesions, and always accessible to discovery, its value would be infinitely enhanced, for, when not present, we could affirm the absence of tuberculosis, a point of as much value in practical diagnosis as the direct diagnosis itself.

We have been crying out for some means to diagnose phthisis pulmonalis early, for we have realized that the earlier the discovery of the malady the more certain we were to stay its ravages; and for a little while we thought we had discovered this desideratum in the finding of the tubercle bacillus in sputa; but, alas, we soon found that when we found the tubercle bacillus in the sputum the case was no longer an early one. We have learned, that, in the very early stages of this affection, in many, very many cases, indeed, there is only a slight hacking cough, or none at all, and no expectoration, or none in which we could find the tubercle bacillus (even if it were present in the lungs) for long periods of time, before the development of a group of suggestive symptoms of a beginning lung malady; and yet all this time many of this class of cases were being diagnosed as early phthisis by percussion and auscultation. Take into consideration here the facts that if the presence of the tubercle bacillus were pathognomic of phthisis pulmonalis, its discovery by the 'scope would still be a defective method of diagnosis, employed to the exclusion of other methods in some respects, namely: While it could tell the presence, the findings in the sputa could not determine the situation, the stage, nor extent of the disease, all admittedly factors in a full diagnosis, in some instances of great moment. In this connection, too, it must not be forgotten that aside from the cases in which there is no sputa, or in which it is difficult to obtain, or in which we have to wait for a long time to secure "representative" expectoration, there are a very large number of cases in which we can only get sputa at the expense of great annoyance and sometimes almost violence, namely, in infants and many children. I might say, in passing, that if we wish to have a practical demonstration of the value of the older methods of diagnosis as compared with the purely bacteriological ones, just spend a few months in the general medical wards of a children's hospital, and you will be more enamored than ever of your old and tried methods of ascertaining whether lungs are consolidated or have cavities. You will make ninety diagnoses of pul-

monary maladies by the older methods where you will make one by the methods of the microscope with which you are fully satisfied. It is perfectly evident to observing clinicians that tuberculosis in infancy and childhood is very prevalent, perhaps not more prevalent than formerly, but now discovered more frequently, and this increased discovery of pulmonary lesions at these periods of life is due almost entirely to the efficacy of the older methods of percussion and auscultation, and hence men of practical experience are recognizing the absolute impossibility of correctly diagnosing or excluding the thoracic affections of early life without the employment of the ancient methods, and in more than nine-tenths of this enormous class of cases (relatively) the discovery of micro-organisms in the sputa plays no part whatever. In casting up the relative value of these methods as applied to these chest affections of the young, it must be recollected that most of these diagnoses are objective, and by the method of exclusion, and hence the negation of physical signs to auscultation and percussion becomes of infinite value, far more so than the negations of the microscope, even if that method were as readily available as the older means.

I think we may say that the tubercle bacillus in sputa is a *physical sign*, sometimes present, and sometimes absent, in pulmonary tuberculosis, ordinarily not found early in the disease, and that its absence from even successive specimens of sputa does not absolutely exclude tuberculosis. The tubercle bacillus is a sign discovered by inspection, if you please, and, when found in connection with certain physical signs, ascertained by the older methods, of great value as disclosing the probable nature of consolidations or cavities, but that the tubercle bacillus by and of itself does not tell the seat, situation, the stage, the extent, or whether the lesion is active or quiescent nor does it give any information concerning concomitant physical conditions associated with the various phases of phthisis pulmonalis in its progress either up or down. In this summary it is presumed that it is remembered that the micro-organism may be accidentally present in the expectoration, and that the fact of its probable accidental presence can only be assured by the absence of physical signs obtained by percussion and auscultation, and often also by the absence of the rational symptomatic phenomena suggesting phthisis pulmonalis; and, that, therefore, its mere presence, while suspicious, and always requiring to be accounted for, is not pathognomonic of lung tuberculosis, and only becomes pathognomonic

when correlated to symptomatic phenomena or physical signs indicating lung infiltration.

I have personally come in contact with cases whose sputa showed Koch's bacilli, which cases, on that account, were regarded as unquestionably tubercular, the subsequent course and history, as well as the absolute absence of signs, indicating lung infiltration, showing these subjects not to have had pulmonary tuberculosis at all.

Perhaps this phase of the subject will permit me to digress as to the relative value of the older methods and the bacteriological ones, in the exclusion of pulmonary lesions, a phase of diagnosis of the greatest possible importance and value, and which we must employ daily in cases in which there is any obscurity whatever. It is rare, indeed, that cases present themselves, having even a suspicion of pulmonary disease that a positive decision as to the existence or non-existence of disease in the thorax cannot be affirmed or negatived at once by a physical examination of the chest. I can believe that under exceptional circumstances infiltration, tubercular in character, can be so placed, and outside the usual situations (perhaps centrally) that the symptoms suggesting the possibility of lung invasion may be present for some time before the physical signs of that implication are evident, but those cases must be excessively rare and are, then, probably not elicited because of the inability of an individual examiner to find them. I have heard of cases presenting the symptoms of phthisis in which the physical signs of that malady in its early stage, were not discoverable, but I have never seen one, and, therefore, can only express the views of others as to the impossibility of finding physical signs to correlate with the symptoms. I have, however, had many cases in which, after finding signs indicating slight lung consolidation, I have taken plenty of time and the thermometer, to decide whether these signs indicated an active lesion or not. It hardly seems rational to believe symptoms will be present without lesion, and it seems just as rational that these alterations in tissue can be discovered if our knowledge and skill are only sufficient. Investigations of the sputa in many of these cases showing symptoms suggestive of tubercular lung lesions, in which the examination of the chest disclosed signs of slight lung infiltration, were entirely negative so far as the presence of bacilli were concerned. I have grown to believe, therefore, the tubercle bacillus is a late, rather than an early physical sign of pulmonary tuberculosis, and in this view I am by no means

alone. I cannot, therefore, do anything but emphatically deprecate the assumption of no tuberculosis when no bacilli are found. If I were not speaking simply of diagnosis it might be well to emphasize the enormous gravity of a mistake in diagnosis, either for the disease when no disease existed, or against its presence when it was really in active existence.

In the exclusion of disease from the thorax because the physical signs obtained by the usual means are absent, the relative value of the older methods as compared with the bacteriologic ones is by far and away in favor of percussion and auscultation, and, besides, is the more quickly available, for we do not have to wait for sputa, and worry whether it has been properly secured, or whether it could possibly have become contaminated in any way. To my mind the actual exclusion of thoracic disease, at the immediate bedside, is best accomplished by the employment of the older methods of investigation. I do not at all wish to belittle the findings by the microscope in the diagnosis of tuberculosis of the lungs, but rather to precisionize the role it plays in the detection of that disease, and to deprecate with all the emphasis of which I am capable, the exclusive reliance upon microscopic findings and the consequent neglect of the older methods to which such a course would ultimately and inevitably lead. There are too many cases not diagnosable by the scope, there are too many chances of error, and when we are diagnosing disease we might as well do it properly as the wrong way, and, besides, it must be evident that if one depends upon the microscope alone he will not diagnose a large number of cases that could be readily be recognized by the older measures. If the time should ever come when the older methods should become obsolete diagnosis will take a distinct and decisive step backward, and while possibly we will not be quite so densely ignorant of pulmonary diseases as were those men who were compelled to practice medicine before the discovery and application of percussion and auscultation (and had the opportunity to be wrong in their diagnoses of pulmonary maladies more often than they were right), we will approximate to that state of ignorance.

While I have said this much in regard to the relative value of the older methods and the microscopic findings in what may be called "straight" cases of pulmonary tuberculosis, I want, in all justice and fairness, to say that the older methods have been strikingly augmented in value, in usefulness, and in precision of inter-

pretation of signs, by the discovery of micro-organisms by the microscope. I refer to a class of cases in which pulmonary consolidation is made out by the older methods, but the nature of the consolidation is in doubt, until, by the aid of the 'scope, we are able to demonstrate the presence of the tubercle bacillus or some other micro-organism. One has only to see a few "mixed" cases to realize what a wonderful boon to diagnosis this newer method is, and how readily and certainly bacteriological findings clear up a diagnosis. For instance, take a case of emphysema of the lungs, in which we suspect, from clinical symptoms, that the vesicular dilatation is complicated by tuberculosis; you can readily imagine that there may be no reliable physical signs found by the older means, or, if present, these signs may be obscure or referred to the emphysema itself, and hence signs, if found, may not be interpretable. Here the discovery of the tubercle bacillus in the sputum, correlated with the symptoms that made us suspicious of a coexisting tuberculosis, is sufficient for the diagnosis of that affection, but, most unfortunately, absence of bacillus does not exclude the disease Take those lingering cases of what we at first thought were croupous pneumonia, where we have all the physical signs of that affection, the discovery of the tubercle bacillus, together, perhaps, with the micro-organisms of pneumonia in most instances, at once establishes the "mixed" character of the lesion and alters the character of the treatment as well as the prognosis. Take, as a further example, those by no means infrequent cases of pulmonary hæmorrhage occurring in the subjects of valvular heart disease. We suspect phthisis, for, as an actual clinical fact, these two affections are very frequently associated. Our examination of the chest discloses signs of consolidation. The question as to whether the consolidation we find is an infarct, a broncho-pneumonia, a croupous pneumonia secondary to the lesion, or a co-existing tuberculous lesion, may often be settled, when other diagnostic factors fail us, by the finding in the sputum of Koch's bacillus, and, again, with this discovery will the whole character of the treatment and the prognosis vary with the diagnosis. In point of fact, I am only too glad to confess that without the aid of microscopic findings, in a certain class of cases, accurate diagnosis is absolutely impossible. All the technical skill in physical diagnosis is vain, after a certain stage in the investigation is reached. Physical conditions are discoverable but they are not interpretable without the microscope's aid.

Aside from the diagnostic significance of the tubercle bacillus, the prognostic value of that micro-organism in sputa is not so great as its diagnostic value, so far as my individual experience goes. Some authorities have declared that certain differences in length and width have some prognostic significance, but these opinions have not as yet been sufficiently investigated by the profession to have definite value, and these prognostic factors are hence still sub judice. If I find the tubercle bacillus alone, that is, not associated with streptococci or staphylococci, the prognosis seems to me better than when the case is a mixed one, so far as micro-organisms are concerned. Do not lay down your weapons of defense in despair because you find the tubercle bacillus present. Pure tuberculosis is more manageable than a mixed infection. As aids in prognosis the modifications to be observed in physical signs by the older methods are more to be relied upon than the microscopic findings. The unreliability of the micro-organism prognostically is well illustrated in the fact already stated that cases of phthisis pulmonalis are frequently discharged from sanitariums clinically cured of their malady, with the tubercle bacilli still present in their sputa.

Respecting the diagnosis of phthisis pulmonalis by the X-rays alone, I have to say that an examination of the chest by means of the fluoroscope is simply a method of inspection, and its findings require definition and interpretation by the older methods and sometimes also by the 'scope. Light areas are made out, dark areas are easily discoverable, and the movements of the diaphragm can be noted; but your percussion note and your auscultatory signs tell you what these dark or light areas mean. Therefore, as a special method of diagnosing pithisis pulmonalis in its early stage, the X-rays alone need not be seriously considered.

The diagnosis of the consolidation of phthisis pulmonalis by the spirometer are also beyond the pale of serious consideration. Diminished expansion, if discovered, must be interpreted by percussion and auscultation.

Concerning the value of injections of tuberculin for the diagnosis of pulmonary tuberculosis, I have no opinion to express as to its relative usefulness compared either with the older methods or the bacteriological findings, inasmuch as I have never personally employed that agent to diagnose lung tuberculosis, the phase of diagnosis with which I am alone concerned at this time.

My plea in this paper is that the older methods of chest diagnosis

shall not be neglected for the possibly more fascinating yet less convincing ones of bacteriology. I am assured we can never do without percussion and auscultation no matter how profound our knowledge and skill with the microscope becomes. We should not sanction that growing spirit which perhaps unconsciously endeavors to arrogate certitude to its bacteriological findings, and which findings always need to be backed up by the ascertainments of the older methods in order to make the diagnosis reasonably tenable. My further plea is that the two methods, the old and the new, shall be correlated, as they should be, and one seldom used to the exclusion of the other, and if only one method is available, as in infancy, childhood, the unconscious, the unmanageable, the insane, in those too ill to expectorate, or in those who do not expectorate, the older method is preferable, and entirely to be relied upon. Please do not forget that we diagnosed phthisis pulmonalis with wonderful accuracy by the older methods long before Koch discovered the tubercle bacillus, and that there are many instances in which the diagnosis is so unequivocal that we have no need whatever to ascertain the findings by the microscope in order to be perfectly accurate in our diagnosis. I want most of all to protest against the man, who, having a patient presenting symptoms suggestive of lung tuberculosis, secures that patient's sputum, examines it, and finding tubercular bacillus declares the case to be one of tuberculosis, or, not finding the bacillus, declares that no tuberculosis is present, and who is either too lazy or too incompetent to examine the chest by the older methods.

REPORT OF A CASE OF SUSPECTED TUBERCULAR PERITONITIS TERMINATING IN RECOVERY.

ANNA D. VARNER, M. D., WILKINSBURG.

Miss H. B., aged 20; height, 5 feet, 4 inches; weight, 107 to 110 pounds.

Family history is decidedly tubercular. When she was four months old her mother died of phthisis pulmonalis, and an uncle on her father's side succumbed to the same disease four years ago.

At birth she weighed three pounds, and all during infancy she

required constant attention to prevent the development of some form of tuberculosis. Her tonsils were enlarged, the cervical glands swollen, and there was a general catarrhal condition of the nose and throat. As she grew older and stronger these conditions were much improved, excepting the cervical glands, which never in her whole life remained in a normal condition long at a time. At eight years of age she had a serious attack of diarrhœa, the precise nature of which could not be ascertained. Her menses appeared when she was fourteen, and gave her no trouble until last winter.

Five years ago she came under my care, and many attempts were made to reduce the swollen glands with such remedies as Bacillinum and the Calcareas, resulting only in temporary relief. During the past two years they have been swollen more than usual.

Last September she wished to enter Smith College, but fearing the work there would overtax her strength, we persuaded her to enter a private school for young ladies in Massachusetts, hoping the light work, regular hours and change of atmosphere would have a beneficial effect. And so it seemed, for she gained ten pounds over her average weight. She told us afterwards that she felt very well for three months, though she was constipated, and for the first time irregular in her monthly periods, the intervals being from six to eight weeks. At Thanksgiving time she felt languid, and from then until Christmas, the constipation was aggravated, with "such a stiff feeling of the abdominal muscles."

She started home for the holidays in a heavy snow storm, boarding the train with wet shoes and skirts. The following morning she arrived home exhausted, with a sore throat and temperature of 101° F. These symptoms rapidly subsided, and she was permitted to be up and about the house on Christmas day.

On the 27th of December she was taken suddenly ill with severe pains in lower part of abdomen and a temperature of 104° F. Her menstrual period was several days overdue, and judging that the flow had been suppressed by her cold, we treated her accordingly with hot foot bath, hot fomentations to abdomen, large hot enema, and Aconite or Pulsatilla internally. Within the next twelve hours the inflamation had extended all over abdomen witht great sensitiveness, pain, distention, continued high fever, rapid pulse and some dyspnœa. Efforts to keep the intestinal tract open, and to bring on the menstrual flow, resulted in very small bowel movements, and on the 29th, the third day of her illness, in a slight

offensive bloody vaginal discharge. This increased gradually to almost a natural flow, which continued for three days. The temperature dropped to 100.3° F., perspiration was free, and relief seemed in sight. However, it was only temporary. The temperature fluctuated, the pain and distention increased, she grew very restless and very thirsty. The bowel tract kept open, for she passed flatus and had an occasional small involuntary stool. Her mind was perfectly clear, eyes bright, mental condition hopeful, reminding me so often of her uncle during the last few weeks of his illness. She complained especially of pain in left ovarian region, and hot flushes which were always worse when she awoke out of sleep. Lachesis, prescribed on these symptoms, gave temporary relief. Meanwhile she grew more helpless and prostrated, and on the night of January 4th the temperature in axilla rose to 104.4°, pulse 144, thready and irregular and much dyspnœa. Her condition was rapidly becoming very serious. On the keynote, profuse perspiration without relief, Merc. sol. 6x was administered, and we continued the high saline enemas, which we had used from the beginning, for the double purpose of keeping the bowel tract open and stimulating the heart's action. At 4 A. M. there was an immense brown, slimy, involuntary bowel movement. During the next six days she had sixty stools precisely of the same nature, varying in quantity. These relieved the patient of much of the pain, distention and restlessness.

January 17th the temperature dropped to normal for the first time, pulse 104, respiration 30. Now at times she had pains in left side of chest and in the right lumbar region, the swelling of the cervical glands disappeared, there were localized sweats each lay on face and chest, feet cold and clammy, and the whole abdominal surface was covered with brown spots and a rough red rash. She still complained of flushes of heat. Calc. carb. 1m improved the circulation and warmed her feet in a trice.

January 23d. The temperature was 98° for a very short period, but rose again slowly, and two days later made a sudden jump to 103°. Again there was an aggravation of all symptoms with a great deal of pain in abdomen, distress on urinating, etc., but no sign of menstrual flow.

On the first day of February she put her hand up to her head for the first time, and a week later turned on her side without assistance. This will give you some idea of her prostrated condition.

February 10th Dr. Woodridge examined the blood, urine and

sputum. The blood examination showed hæmoglobin 65 per cent., color index 80 per cent. In other respects about normal. No bacilli were found in urine. Urine specific gravity, 1024; solids, 85 per cent. of normal; urea, very low; phosphates in excess; albumen present in moderate amount; indican in excess. A few renal and abundant vesical epithelial cells, a few hyaline and granular casts.

February 18th, she had a creepy feeling several times during the night, more pain and soreness in abdomen.

February 19th, 9 A. M., severe chill, followed by nausea and vomiting, dyspnœa, cold sweat on face, collapsed expression, temperature, 103.4°; pulse, 150; weak and thready. Veratrum alb. 1m was prescribed.

4 P. M.—Temperature 98°, and the body was bathed in a profuse perspiration.

6 P. M.—Slight chill. Seven P. M., temperature, 103.2°; pulse, 134. The temperature remained high for several days; she had severe backache, pelvic pains, frequent sweats, yet not a drop of menstrual flow.

By this time she was terribly emaciated, although she was well fed on the most nourishing liquid and semi-solid foods available.

A thorough local examination now revealed dulness in the hypogastric and ovarian regions, a uterus absolutely fixed, and a pelvis packed with exudate surrounding ovaries, tubes and uterus like earth around the roots of a plant. The abdomen which had been quite flat for a time began to slowly distend again, and the percussion note clearly indicated some fluid. A treatment that would produce absorption was indicated, so on the 27th of February we began using glycothymoline vaginal douches, and later the galvanic current, placing one sponge on abdomen and the other on perineum. Each day she drank a quart of calcium chloride water from the mineral springs at Chase City, Virginia. The remedies used during the following two months were Tuberculinum, Ars. iod., Calc. iod. and Iodoform, in the order named.

On the 20th of March a slight gain in weight was noticeable. There was no menstrual flow this month, nor disturbance of any kind at the time of its appearance, excepting a rise of temperature, which was quickly checked with Acon. 30.

In April she was permitted to leave her bed, providing she would use a wheeled chair, this plan being adopted to keep the pelvic organs at rest until absorption should take place.

The latter part of this month she had another aggravation with a temperature of 102.2°, only this time the menses appeared, and have continued regularly, without much disturbance, up to the present time.

In May she went to Walters Park, and remained there through the summer. Light massage was given there, the glycothymoline douches continued, and the bowels kept active with enemas or citrate of magnesia. She spent her days out of doors, and part of the time slept out at night. When I last saw her in May the pelvic exudate had greatly diminished.

She was ordered to use her wheeled chair entirely, excepting in her own room, which she did until the latter part of July, when Dr. Howells wrote me that my patient weighed 100 pounds, the uterus was freely movable, and the exudate gone. Then she abandoned the chair.

Those cervical glands which we hoped had disappeared forever enlarged again as improvement took place, and there they are as much in evidence as ever.

As to treatment, aside from the remedies mentioned, Belladonna and Bryonia were used early in atttack. Cantharis and Berberis for the urinary symptoms later on. After the first few weeks she was given oil rubs and a fresh air bath with the windows wide open for two hours each day. Her own cheerful, hopeful disposition, and a good stomach, which craved and relished food, save for one short week, were factors which contributed in no small way to her ultimate recovery.

It seems to me this must have been a case of tubercular peritonitis; with a family history so pronouncedly tubercular, with her own history of swollen cervical glands, that emaciation, those sweats, masses of exudate, that typical tubercular mentality, and that long-continued irregular temperature, with its sudden exacerbations; what other form of disease could it have been?

Da Costa gives as the symptoms of tubercular peritonitis, presence of tubercles in lungs or enlarged caseous glands, abnormal pain, uneasiness, soreness to touch, nausea and vomiting, diarrhœa alternating with constipation, loss of flesh and strength, tense distended abdomen, œdema of lower limbs, irregular fever, sometimes high, sometimes almost ceasing, repeated exacerbations, presence of nodules in rectum, in sacro-uterine ligaments, inflammation around Fallopian tube. Sometimes it develops with rapidity, and has the aspect of an

acute complaint. Butler adds, pigmentation of skin over abdomen, and claims there is no special difference between simple acute peritonitis and the acute form of tubercular peritonitis.

Dr. J. H. McClelland was in consultation twice early in the disease and once later. Dr. Stewart saw and examined her during the last severe exacerbation, and both will verify the amount of exudate in that pelvis

DISCUSSION.

Dr. Mary A. Cooke: I have a case in which iodoform has been administered with good effect. The case is one of tubercular peritonitis operated about eighteen months ago, and the whole surface of the pelvic organs seemed to be covered with these little tubercles. Since that time she has been under my care, and I have given her iodoform 6x, about one powder a day. She has not come to me lately, but comes to me every time she has a bad attack, and she really is in very good health at this time. She is a woman who does her own work, and is able to attend to household duties. I think iodoform has had a very good effect.

Dr. W. G. Dietz: It might not be amiss in connection with the topic of tubercular peritonitis to say that you are all aware of the remarkable results that have been produced by simple laparotomy incision without any further operative interference, the arresting of inflammatory process followed by the consequent resolution of the products of the inflammatory process. Thus far there has been no satisfactory explanation of the why and wherefore, the modus operandi by which the air getting in is causative of the retrocession of such inflammatory conditions. The fact remains, and I think it is sufficiently established to always make it worth while to consider the question of laparotomy, of simple abdominal incision, in cases of tubercular peritonitis.

REPORT OF THE

SECTION OF MATERIA MEDICA.

Berberis Vulgaris, by Edward Cranch, M. D.
Lachesis, by M. M. Fleagle, M. D.
A Few Words on Sepia, by A. R. Garner, M. D.
Materia Medica Pura; Its Worth; Its Mission, by Aug. Korndœrfer, M. D.
Drug Pathogenesy, Symptomatology and Therapeutics, by C. S. Middleton, M. D.
Indications for the Indicated Remedy, by O. H. Paxson, M. D.
Some Observations Concerning Materia Medica and Its Teaching, by C. C. Rinehart, M. D.
Clinical Verification of Drug Action, by G. W. Smith, M. D.
The Passing of the Pure Symptomatological Prescriber, by E. R. Snader, M. D.
Practical Use of Ailanthus, by M. A. Wesner, M. D.

BERBERIS VULGARIS.

Presented on behalf of the Homœopathic Medical Society of Erie County.

EDWARD CRANCH, PH. B., M. D.

In presenting this rather ordinary drug, its natural history and provings will be passed over, and only its clinical relations described, as verified by members of the Erie County Society.

Berberis vulgaris has proven useful in a class of cases having chronic evidences of a diathesis variously known as latent gout, lithæmia or uricacidæmia, a diathesis affecting, in one form or another, one-fourth or one-third of the human race.

From the climate and water supply of the great lakes occasions frequently arise for the use of Berberis, and this drug is an important one in these particular localities.

Berberis cases often have histories of gravel, old eczemas, joint affections, pruritus, stomatitis, hæmorrhoids, ophthalmia, and other

conditions common to the "psora" of Hahnemann. For Hahnemann, while he knew all about scabies and the itch mite, the "sarcoptes hominis," as proved in his "Lesser Writings," did not, as asserted by John K. Mitchell, of Philadelphia, declare that the "origin of all chronic diseases was in the itch." See Vol. VII., of Cohen's System of Physiologic Therapeutics, on page 79, where, in treating of osteopathy, Dr. Mitchell uses the following remarkable language, showing at once the limitations of his information: "In short," he says, "we have to deal with a new 'pathy,' that is to say, with an exclusive system founded on one idea, an idea, to be sure, rather more rational than that now abandoned theory on which another exclusive system was built, namely, the origin of all chronic diseases in the itch."

As we well know, Hahnemann, after excluding the miasms of syphilis and sycosis, or the "fig-wart" disease, one of the forms of gonorrhœa, used the Greek word "Psora," meaning thereby any itching eruption, and not only the itch of scabies, and grouped under this one term most of the diatheses which are now known as tubercular, cancerous, lymphatic, and, chiefly lithæmic, for the simple reason that all these miasms were apt to be attended, mostly in their early stages, by an itching eruption, the suppression of which was often followed by very disastrous later complications, as we sometimes witness at the present day.

If for "antipsoric" we read "antilithæmic," we may get a clearer idea of the value of Berberis, as well as of other so-called "chronic" or "antipsoric" remedies.

Future pathology may make still newer generalizations possible, but the present generation of doctors may, if they choose, understand what we mean and what Hahnemann tried to tell us, as well as the pathology of his day permitted.

Berberis vulgaris, in accordance with the law of cure, is always to be thought of when there is a history of gravel, or of rheumatism, or stiffness of joints, the special or "keynote" pain being found over the right kidney, radiating forward and downward over crest of right ilium.

All Berberis pains radiating to neighboring parts are not affected by moderate pressure or by movement, but are worse in certain attitudes, especially in prolonged standing, as with dentists, barbers, counter-clerks, motormen, and others of like occupations.

The Berberis pains often seem like those of lumbago, and are

worse on active exercise as well as on first rising, with sometimes temporary relief after brief exercise, but severe aggravation follows continued motion.

Berberis here differs from two of its related remedies, Rhus toxicodendron, which has relief from pain on prolonged exercise, but the exercise in the Rhus case is brought to an end by weariness, and Ferrum, in which there is complete relief for a long time, after moderate motion.

In gout the metatarsus and metacarpus are often the seats of pain as if sprained, but for regular acute arthritis, with fever, Sabina or Colchicum are indicated oftener than Berberis.

Kidney colic is relieved and gravel expelled under the action of Berberis, while the urinary secretion is always increased when its action is favorable.

Berberis acts well in fleshy persons, good livers, but with little endurance. In gall stone colic it is less often indicated than in affections of the kidney.

An often verified symptom is a nervous sensation as of a tight cap pressing upon the whole scalp.

In common acne Berberis vulgaris has been sucessfully employed.

In one case of severe peritonitis, in a young farm hand, from exposure to cold and wet, the remedy, after a day or two, was found to be Berberis, by noting the dense deposit of mealy sand, true gut, accumulating by the spoonful in the urine. Berberis in tincture, in water, cleared up the whole case in a very few days. The man died two years later from volvulus brought on by a strain. The diagnosis of the point of obstruction was made by electricity passed through the intestine after this had been filled with water in the attempt to restore peristalsis, but an operation was refused, so the diagnosis was only confirmed *post mortem*.

The Berberis seems to act best in the tincture and the lower potencies, but some cures of chronic rheumatism have been noted from the 200th.

It must not be confounded with the Berberis aquifolium of Oregon, a quite different plant. The latter, an excellent antisyphilitic also valuable in acne, but of no special value in rheumatism or gravel.

It has, however, the symptom of a band about the head above the ears, not the full cap sensation of Berberis vulgaris.

The chief rival of Berberis is Sepia, which, however, has a much

wider range of action, and affects the whole system more profoundly. The special action of Sepia is less on the kidneys and ureters and more on the bladder and urethra.

Lycopodium covers much ground in lithæmia, but has still closer relationship with the tubercular diathesis, covering more of the respiratory and nutritive changes, which are hardly touched by Berberis.

Lithium is perhaps contained in the juices of Berberis, at any rate its action is in many ways similar, except that it deals more actively with the heart and other organs above the diaphragm, while Berberis acts chiefly below that muscle.

Ledum palustre is also related, but has more chilliness and less backache.

LACHESIS.

M. M. FLEAGLE, M. D., HANOVER.

Should any Homœopathic physician be asked to name a drug essentially Homœopathic in its origin and use he could probably not do better than cite the *Lachesis trigonocephalus*, a drug whose wonderful medicinal properties stand out clear and pure, a living monument to the efforts of one of the greatest Homœopathic physicians the world has yet seen, Dr. Constantine Hering.

Lachesis is a remedy with a wide range of action, frequently indicated, and one we will need to study much in order to know how to use.

The venom of Lachesis is a septic poison of *astounding energy*, attacking the *cerebro-spinal* nervous system with *great violence*, the effects reaching over, as it were, and rapidly involving the *sympathetic* nervous system, thus undermining the very foundation of life.

When we study the finer (curative) action of Lachesis on the human body, however, it seems to fit pretty nearly the whole human race, for there is much of the serpent in man, both in his character and disposition. Note the low-mindedness, the lust, the insanity, the self-conceit, the envy, the hatred, the revenge, and the cruelty of man, the very serpent leading man away from all that is good and pure.

You will not be surprised, therefore, at the effect of Lachesis on the *mind*. The mind is overwhelmed with suspicion and jealousy, jealousy and suspicion even of one's nearest and best friends, jealousy without cause.

Many insane people need Lachesis. It may be religious insanity, puerperal mania, or the delirium of any of the diseases associated with blood poisoning, but, whatever the form, it is characterized by an exaggerated mental state. Thus the patient is constantly talking, always hurrying, cannot do things rapidly enough, leaves sentences half finished, jumping from subject to subject, must hurry onward, *great loquacity* (Agar., Stram., Act. rac.). Thinks she has committed the unpardonable sin, etc. There may, however, be melancholy with hopelessness and despair, especially in young girls who have met some great disappointment, and the patient becomes indifferent to everything (a state of apathy).

Lachesis is a drug which possesses many striking and characteristic modalities; for instance, many symptoms are *worse after sleep*, or the patient *sleeps* into an aggravation of his complaints, and nearly all diseases in which Lachesis is indicated will, at some time, manifest this peculiarity. Another characteristic modality is its tendency to affect the *left* side of the body, but the most peculiar thing is that the symptoms tend to *travel from left to right* (Plumbum, Sabadilla, Spigelia). This point I want to impress, for many remedies act more on the *left* side of the body than on the right, but *few* remedies travel from *left* to *right*. . .

The Lachesis patient is *worse* from *heat* whether radiated or from warm food or drink. He is also worse in the *spring time;* his complaints, though better in winter, rouse up in the spring just like the snakes.

On account of its action on the nervous system, you will find *great sensitiveness*. This condition qualifies many symptoms and is characteristic. The patient is easily disturbed by any noise or sound, and the *least touch* is unbearable, anything tight around the neck is intolerable, and the patient must loosen his collar, or wears none. This characteristic is general, no matter in what part of the body the sensation manifests itself. We may say, therefore, that Lachesis *antagonizes all constriction*. You will be surprised to know, however, that notwithstanding this extreme sensitiveness to the least touch, the symptoms are *relieved by hard pressure* (if made by the patient himself). This partly explains the modality

of the throat symptoms so characteristic when Lachesis is indicated, viz.: "Pain *worse* when swallowing *saliva*, but *better*, or even *relieved* by swallowing *solids*." Many other modalities might be named here, but time forbids.

From the *generals* of this remedy we come to the *particulars*, and cite some conditions in which Lachesis has brought many brilliant cures. You will find Lachesis a great remedy for disorders occurring during the period of the menopause.

Let us look at a type of case frequently met with: A woman, 42 to 50 years of age, enters your office. You will instantly notice her extreme nervousness. She cannot sit quietly, she moves her hands or her feet constantly, and fans violently. Her face is deeply flushed, or almost purple, and she seems as if she would suffocate. A warm room is simply intolerable, she must have fresh air and feels better from it. Her whole body seems in a tremor, the muscles of the face twitch, her voice even trembles, and she can scarcely protrude her tongue, it trembles so much. She will tell you that sounds, even of music, nearly distract her, and she must remove the clock from the room, as the ticking annoys her (compare Coffea, Nux vom., Theridion, Borax, etc.). She lies awake nearly all night, cannot sleep, or, if she does, perchance she awakes with a raging headache and nausea.

This great nervous tension continues until the *flow begins* when there is a wonderful *relief of all symptoms*. The symptoms of Lachesis are worse before and after the menstrual period, but better during the flow. I want to say here that no matter what the nature of the disease is, if the symptoms are relieved by a flow of blood or by any discharge, we should think of Lachesis (Zincum).

If, in the foregoing case, we find *flushes of heat*, with tendency to *fainting spells*, there is probably no remedy in the Materia Medica that can compare with Lachesis in relieving these symptoms, but it must be used in potency to get the quickest and best results.

We sometimes meet another class of cases which are very difficult to handle, and which are also apt to be associated with the menopause. In these cases we find profuse hæmorrhage at each menstrual nisus, the blood being *dark*, in fact, almost *black*, sometimes partly coagulated and partly fluid, but always dark in color. Mark this well. Now, this patient keeps flowing more or less in quantity for two or three weeks at a time, then a week or ten days' intermission, then flowing again for two or three weeks, and so on

for months, until finally the patient is in a desperate condition; in fact, almost exsanguinated. Examination may reveal the presence of fibroids or some malignant tumor, but the hæmorrhage may also be *vicarious*, passing off through the bowels, or some other organs, but no matter what the condition is, or from what organ the hæmorrhage occurs, if the blood is dark (or black) other symptoms corresponding, Lachesis is a remedy to be thought of and prescribed in medium potency, and the results will not only astonish you but the patient also.

On account of the action of Lachesis on the blood, causing rapid decomposition, we find it indicated in the lowest and most malignant forms of disease, whether it be malignant diphtheria, scarlatina, erysipelas, septic conditions or typhoids.

In these conditions the skin and mucous membranes take on a *dark-bluish* or purple color, the discharges become *very offensive*, there is a tendency to hæmorrhages from all of the tissues of the body, and these discharges are *black*, or at least *very dark colored*. Thus we have dark chocolate colored stools, or stool like charred straw; *black urine*, and even *bloody sweat*. Malignancy, then, just like the serpent itself, characterizes its effects on the human body.

Lachesis has a wonderful action on the *heart*. When, after some acute disease, as, for instance, pneumonia or diphtheria, the patient, in her weakened state, overexerts herself, do not be surprised to be sent for hurriedly, but go at once, for you will find your patient almost breathless, the chest heaving, and the heart beating so rapidly that you cannot count it. Most *violent palpitation*, easily visible through the chest wall for the patient will have torn her clothing from her neck and chest, and to her suffocation seems imminent.

You will find her sitting upright, or leaning slightly forward, for she cannot lie down. She must have air, and wants to be fanned, but strange to say you will find the person fanning at quite a distance from the patient, and *fanning very slowly* (rapidly, Carbo veg.), for any one coming near to the Lachesis patient seems to take away her breath, and much air from fanning would do the same thing. Fear and anxiety are written all over her countenance, and she feels that she would die. If, perchance, the palpitation should cease, the least motion or excitement will renew it. If the patient drops off into a little sleep, she seems to stop breathing (Amm. carb., Grindelia, Lac. can., Op.), and wakes up suffocating. The patient also complains of a very sore or cramp-like feeling around

the heart. Now, friends, in such cases as these you may prescribe Lachesis with great confidence, but I want to give you a warning, and that is, that when there is a true organic affection of the heart with tendency to failure of heart action, *do not give Lachesis*, for it will surely hasten the death of your patient.

There is a symptom found under Lachesis to which I would like to call your attention, principally on account of its sinister significance. It is this: "Constantly obliged to take a deep breath." This symptom alone has often led me to suspect an oncoming cerebro-spinal meningitis, even when the other symptoms were yet masked, but no matter with what disease it is associated, it is always of serious import, as it denotes an impending paralysis of the pneumogastric nerves, and we should be governed accordingly in our prognosis of the case.

When the symptoms agree, Lachesis is a very useful remedy in carbuncle, or in blood poisoning from malignant local inflammation. In pneumonia with hepatization of the left lung, do not forget Lachesis, it will save you the signing of some death certificates.

In low asthenic conditions Lachesis seems to stand between Arsenicum album and Carbo veg.

Lachesis is a dreadful poison, and if repeated too frequently, especially in potentized form its effects can never be antidoted.

Lachesis will not act with coffee, so you must prohibit it entirely if you want the best results. Many remedies suggest themselves for comparison, but time forbids. Only by a strict individualizing of patients and remedies can we hope to attain to a fair degree of proficiency in prescribing. Let us then continue to study *all the symptoms of the patient*, so that the drug-image as well as the image of disease may stand out clear and distinct before our mental vision, and we will become more firmly grounded in the greatest therapeutic law the world has ever known.

A FEW WORDS ON SEPIA.

ALBERT ROWLAND GARNER, M. D., NORRISTOWN.

The writer of this paper does not intend to give any new symptoms or to entice your imagination into the æsthetic or miraculous, but rather review with you a few Sepia conditions which are often passed by in our haste for "rapid fire" prescriptions and results, although the indicated remedy is silently pictured before us.

Unfortunately, it is very true that too often the Sepia conditions receive other remedies before Sepia is prescribed. Think over your own cases in which Sepia has done well and see if Sepia was the first prescription. It is quite probable that you did not observe the indication for Sepia until you had been forced to it by the unsatisfactory results from the other remedies. Possibly it is because all of the conditions are not revealed at first, and it is necessarily a chronic and deep-seated lesion which is present when every symptom is not always in evidence at the "first sitting," and in consequence of this fact new light may alter one's opinion; yet in the Sepia individual we most always have access to certain objective signs and conditions.

It is not difficult to understand even from her osseous development that other tissues might be susceptible to certain pathological changes. We know it is not a most natural and normal figure for a woman to be "straight down from the shoulders." From the different writings and clinical experiences we find that nearly all organs and systems are affected by Sepia, and especially as in the very complete words of Cowperthwaite, "it diminishes in general the reproductive energies of the vegetative sphere." We are so very apt to be limited in our idea of Sepia to the female sexual organs, or the liver, etc. If we could but rid ourselves of the habit of "routinism" and "specificism" how many more cures we would have.

Some physicians only use Sepia for the menstrual irregularities of young girls, and others never think of it except in prolapsus uteri, post partem states, or in liver spotted, or "nose saddle" cases, still others vary equally, widely as to their pet ideas of a Sepia condition.

As has been stated, the object of the paper is not to give any unlimited symptomatology but merely to recall the Sepia conditions

that we may possibly give it a quicker thought in this class of chronic cases which very frequently have been through long courses of treatment before they reach the Homœopathic prescriber. We should not forget that Sepia has made many of the strongest friends of Hahnemann's teachings, and it is because the writer has heard so many so-called Homœopaths declare that Sepia is not to be depended upon, and that its virtues are greatly overestimated, that this paper is written.

This, however, has not been my experience, but rather the contrary. During my student days in my preceptor's office, there entered a woman, the saddest of the sad. Sepia had been her last prescription. The first time I had ever heard of such a drug. I hastily glanced at a brief "leading symptom" book, which was kept behind the desk. "*Sadness, bearing down pains*, prolapsus uteri, nervous congestion and relaxation was all that my sleight-of-hand act revealed. However, this much established my clue, and it was easy to observe that this poor, dejected woman was closeted with her troubles. Slight conversation soon convinced me that part of her trouble, at least, was a fallen uterus rather than a fallen lover. I was made to feel that lovers were far removed from this unfortunate one. She cared not for another soul other than her own, but about this one she certainly was concerned and distressed. Personal consolation and sympathy made her feel worse. Any amusement or company had no reception from her. Anything done for her aggravated. Her chief solace was to go off in a distant room where she was safely alone and weep. She had observed that sometimes while hurrying for a train that she felt somewhat better, not so draggy and depressed. Other symptoms of which she complained of were: Intense throbbing headaches, especially in temples, sense of heaviness in pelvis, which at times felt as though it would be forced through the vagina so that she would be compelled to sit down and press her thighs together or cross her limbs; very much constipated, and at times a swelling or lumps would protrude from the anus; menses scant and exceedingly irregular and painful, aggravating very much a soreness in region of left ovary and heaviness and dragging in small of back; a yellow discharge which stained the clothing. She not only had a sallow face, but her skin was coarse and freckled, dark rings under the eyes, giving the appearance of much crying. Her build was the regular Sepia type. She was the picture of a woman in distress and loaded with troubles.

Her most general aggravations were in daytime, especially near noon, and when other people were trying to amuse or sympathize with her, while her main ameliorations were from brisk walking in open air or being alone. She was a maiden lady about 38. Subsequently, I learned that this woman was greatly relieved from her prolapsed uterus, and that most of her reflex symptoms had been removed.

This case was so interesting to me that I noted down most of her symptoms and afterward compared them with the Materia Medica. It seemed almost impossible to me that so many symptoms could exist in one individual corresponding so closely to those of any one drug. This very incident has made me take more notice of chronic conditions, and excited persistence of obtaining and observing symptoms and conditions. I am indebted to four of my fellow practitioners, who each gave me one of the following cases:

1. Single woman, 36. Prolapsus, for which she had had two operations and local treatments for ten weeks, from which she obtained no relief. The usual Sepia type with an exceedingly profuse white leucorrhœa, and intensely irritable mentally. She could not cook because the smell of the cooking aggravated her so. She was very much constipated, and also experienced a sense of goneness or weakness in hypogastrium. Sepia 30th cured her absolutely as far as any symptoms are concerned.

2. Single woman, 38. Tumor in right pelvic region; ovarian tumor. Pain aggravated at menstruation. Leucorrhœa offensive, also very offensive and profuse sweating of the feet. Patient was losing flesh. Surgeon advised operation after two consultations. Sepia 15th and 30th were administered, reducing the size of tumor and relieving the pain. The 30th finally cured her condition. The doctor saw her five years later, absolutely no return of former symptoms.

3. Illustrates beautifully a condition expressed in a few words: "Dry cough in women with much leucorrhœa and anæmia." Mrs. E. J. M., December, 1903, age 33. Three children. Since birth of last child, April, 1902, has had *hacking cough*. Tall, inclined to stoop, hair dark, depressed and anxious over state of health, with tendency to weep. Had lost weight, appetite and strength. Beating and pulsating headache. Cough hacking, worse in daytime, no trouble at night. Face rough, red, acne-like eruption. Thick, white leucorrhœa. Goes a week without a bowel movement or desire.

Sepia 12th, finally 30th, with complete relief of all symptoms, and gain of twelve pounds.

4. A young student, 16. Amenorrhœa, headaches and general malaise. Slender build, dark hair, heavy rings under eyes. Sepia 30th cured her completely.

The following case has come under my personal observation: Married woman, 28. Constipation for fifteen years except during the last six months of pregnancy of her only child. Bowel movement all produced by artificial means. General make-up was Sepia; the hair being a light brown. During her menses she was compelled to spend from two to five days in bed; intense throbbing headache, with the most irritable and unreasonable mental state. Felt that she would go wild if her playful child and her kitchen duties were not removed miles from her. She even complained if her husband came into the room, which she wanted dark and quiet. She would toss violently from one side of the bed to the other; nauseated; flushes of heat over her head, face hot; some bearing down pains in pelvis; feet and hands cold; would cry from one-half to an hour at a time. She would tell me she could not conceive what in the world possessed her at these times, which were sure to come during every sickness, to a less extent from any special excitement, such as a small dinner, party or shopping trip in the city. There were many other hysteroid symptoms. Three months were consumed in the administration of emphatic lectures as well as encouraging talks, introduction of abdominal and other exercises, cold baths, etc.

Drugs were used singly from the tincture to the 30th with very slight result. At last I became desperate, and spent an hour with her, during which time Sepia kept coming before me, so that I finally gave her Sepia 6x, tablet trituration, every two hours, for two weeks, with very gratifying results, then raising it to the 30th, made her feel like a different woman; bowel movement daily, shopping with comfort, and menstruating without any great inconvenience; slightly nervous and headache, but all distress and hysteroid symptoms removed.

This form of violent headache associated with such exasperating hysteroid symptoms reminds me of a nurse in Baltimore, who was afflicted in this same manner. She was 23, and one of the brightest and most clever nurses I have ever known. Usually after severe operations, or after any special nervous strain, she would have one

of these spells, and Sepia 6x was the only thing that ever relieved her, and this gave her immediate relief.

There are many cases in which Sepia has been prescribed for pathological conditions peculiar to the drug, in which not only the lesion was cured but innumerable other symptoms which did not seem in any way associated were also completely eradicated. It is for this reason that Sepia Homœopathically prescribed is a very potent drug, because this class of cases are the very cases which seem to control so many phenomena under the disguise of that bane of nervous diseases, hysteria. There are many women who are not so strong as their constantly over-vigorous husbands, who in their loyalty to gratify all the marital relationships are made wrecks from the strain thus brought upon them. Alas! we too well know the countless reflex symptoms which may arise. Again, a mother who is nursing a strong, hungry babe, and who completely drains her system to keep the mammary glands supplied, is likely to have a large line of these symptoms.

Sepia helps these cases and many others where mental strain has helped to disorganize the constitution. It may not always be possible to prove a diagnosis of congestion in a certain lobe of the liver, or that the uterus is relaxed, congested, and has a large boggy cervix, but there may be times when we can look right into the patient and feel that certain conditions are present producing the few subjective characteristic objective symptoms.

Remember, that the Sepia patients are those who are in great need of treatment, and that over half their troubles may never be told. There are few conditions in which we have to read between the lines so much as in Sepia cases.

It is, threfore, fully worth our while to consider Sepia in chronic cases of this type, for if Sepia is indicated it will do its work, and a grand work it is.

DISCUSSION.

Dr. H. S. Weaver: Sepia is not only a female remedy. It is a remedy applicable to both sexes, and not only to the generative organs, but in naso-pharyngeal conditions you wil find it a very valuable remedy. You will find it a valuable remedy in chronic catarrhal conditions, such as you will frequently find in patients who come into your office with a little drop of whitish secretion hanging on the tip of the nose, or giving a history that each time they bend forward

to pick anything up there will be three or four drops of watery secretion dropping from the nose, or that it is very objectionable for them to go out and eat a meal at anybody else's table on account of constant nasal dripping. I have found Sepia in more than ninety per cent. of such cases will cure that and cure it very promptly.

Dr. Julia C. Loos: Dr. Garner has spoken of prolapsus. I want to call attention to the fact that symptoms of prolapsus are very often present when there is no prolapsus whatever. I know recently a case of a woman who had fallen on the ice in winter when she thought she was about two or three weeks pregnant. She had had all the early symptoms of pregnancy, as she understood them, when she had this fall. It was such a severe fall that it affected her nervous system, not only for the time, and gave her severe bruises, but for many weeks afterward she had bodily soreness and general misery, which Arnica soon relieved, but after several months, still thinking she was pregnant and after having consulted a physician several times, although many symptoms indicated that in some of the menstrual periods, which had continued monthly, the conception had passed at the time she would have been at her seventh month of pregnancy as she counted them, she still complained at every monthly period of feeling a bearing down and general misery. She could not be on her feet. She must be in bed constantly, feeling that everything would come from her if she was not. Actual examination revealed the uterus very high, so it was difficult to meet with any satisfaction in examining with the finger. An etherized examination was advised for the purpose of convincing her positively that pregnancy did not exist. I saw her with another physician, and the condition found was a uterus flexed greatly to the right and back, but after the examination was over she said, "If there is not anything there, why is it I have all these feelings of motion, of life, this fullness, and all these feelings of pregnancy?" The consulting physician, an old school doctor, said, "The condition which is there will account for everything you feel." It was less than a week before she had been given Sepia. At her next monthly period she said, "I am delighted to report a great increase in strength and absence of all the uncomfortable feelings I had before. I have not any of that feeling of a necessity to be in bed at all." There was actually no prolapse there, but all symptoms as if there were, which we very often find in Sepia cases.

Dr. W. G. Dietz: There are a few symptoms in Sepia which I

think it is worth while to mention. There is a mental symptom which is very important, that is, that the patient forgets recent events while the memory is perfectly good as to events that had transpired long ago. Another symptom of great importance is obscure pain in the region of the chest anteriorly, which is always relieved by pressure. It competes here with Creosote, which has the same symptom. Whether you call them reflex pains or not, you cannot trace them to any special cause. When a patient comes and holds both hands against the chest, Sepia immediately comes to my mind. Pressing against the region of the heart will relieve a certain distress which the patient cannot explain. A very important symptom is a sediment of the urine, which adheres closely and very firmly to the vessel, so that it requires mechanical aid in order to remove it. The sediment is apt to be of a chalky kind, dirty gray or maybe pinkish in color, which might make one think of Lycopodium, but the pinkish sediment of Sepia, while similar to Lycopodium sediment, is pinkish. Another urinary symptom is the appearance of greasy cuticle on the surface of the urine. It should be mentioned that Sepia has a uterine symptom, that bearing down symptom which is relieved by crossing th limbs. It is relieved in Lilium tigrinum by the patient pressing the hands against the vulva. The skin symptoms in Sepia are very important.

THE MATERIA MEDICA PURA: ITS WORTH; ITS MISSION.

AUG. KORNDOERFER, SR., M. D., PHILADELPHIA.

When Hahnemann, convinced of the inadequacy and unreliability of the accepted Materia Medica, sought to improve the material of its construction, he fully appreciated what Withering so aptly had expressed, "that the task could be accomplished only by taking up the subject as altogether new, and rejecting the fables of the ancient Herbalists, build only upon the basis of accurate and well conceived experiments."

A task of such inherent difficulty and of such extended scope, one that had from the earliest days of medicine defied solution, requiring for its successful issue a mind peculiarly gifted and specially prepared for the work. One, earnestly seeking the truth, ca-

pable of perceiving it, and willing to accept it for its sake alone, whithersoever it might lead.

Hahnemann, whose studies embraced the medical lore of every civilized people, had become deeply impressed with the utter worthlessness of the then existing Materia Medica, and with the equally worthless and grossly empirical therapeutics. His professional instinct rebelled at such lack of positive knowledge and such utter helplessness at the bedside of the sick. His conscience was aroused and to him the appeal of concience was a Divine command. His every energy soon bent to the task of developing a pure Materia Medica: with singleness of purpose and unflagging zeal he spent his long life in labors fruitful to this end.

Step by step he advanced in his investigation, research and philosophy until he was able to give to the profession those masterpieces of research, reasoning and philosophy: The Materia Medica Pura, The Chronic Diseases and The Organon.

In the preface to the Materia Medica Pura, Hahnemann, speaking of the sources upon which the profession had relied for a knowledge of drug action in disease, says: "The humiliating confession must be made that most of the virtues of medicinal bodies were discovered by accidental empirical experience, by chance," and chance, says Hahnemann, "excludes all method." Surely a most unworthy and pernicious plan in a matter fraught with such weighty obligations to, and far-reaching effects upon, the entire human family.

Hahnemann's education, governed possibly by a natural mental trend, led him to the idea that in this, as in every other field in nature, law must govern. Under the inspiration of this conviction he pursued his investigations and developed his philosophy.

As early as the year 1796 he presented to the profession his views as to *method* in an "Essay Upon a New Method for Ascertaining the Curative Powers of Drugs." In this essay he presented much valuable food for thought. During the subsequent decade he followed up the plan therein suggested, making a series of experiments upon himself. The result of his personal provings and research was the publication of the Fragmenta de viribis Medicamentorum, a little volume of 269 sparsely covered 12mo. pages. This was given to the profession in Latin, the language of medicine of his day. In this work we have the initial publication of real Materia Medica, that is to say, a true record of actual drug effects upon the human organism.

Small as it is, and incomplete, it deserves high rank as the pioneer publication in this field of research. Indeed, it is the germ from which was developed the Materia Medica Pura—a work that represents an amount of personal effort and sacrifice never approached by other workers in this field of labor.

The symptoms recorded are an expression of the actual drug effects experienced by himself and his fellow provers, together with credible observations from other members of the profession. Not a line but received his personal inspection, critical scrutiny and approval. Nevertheless, we to-day hear the veriest tyros criticising this work of Hahnemann's as though, forsooth, they were masters of the art of proving and he but a stumbling amateur.

They complain—it is old, it is antiquated. Yet, truth never *grows old*, nor is it *new*, save in the finding only. Its foundations are laid in the ages, it knows neither age nor youth, it is the same yesterday, today and forever.

Hahnemann's Materia Medica Pura is as useful today as in the days when it came fresh from the hands of its maker. Yea, more so; the multitude of confirmations from the hands of the profession have greatly enhanced its value and extended its field of usefulness.

Hahnemann instituted an accurate and comprehensive method of research, a method that guarantees the genuineness of every recorded fact; a method based upon logical sequences, leading unerringly from given causes to given effects; a method that practically eliminates error, masters detail, reveals principles and makes possible the unveiling of laws under which natural forces act.

Under the inspiration and guidance of such method, Hahnemann solved the problem of the development of a pure Materia Medica and a reliable drug therapia. Through this method he acquired a knowledge of principles and laws theretofore unknown, and succeeded, not only in developing Materia Medica upon a scientific basis, but in discovering the controlling law in drug therapeutics.

But we must not rest content with the limit of knowledge reached by Hahnemann; there are still other truths to unfold, other laws to discover. Let us follow Hahnemann in the spirit of freedom which he claimed, but forget not the spirit of truth and honesty that controlled him in all his work. Adhering strictly to the logical method, let us search for knowledge wherever it may be found, and accept whatever is demonstrably true. Mistakes we may, we will make,

but to be deterred by fear of such would be but to stop all progress and prove ourselves unworthy to be called his disciples.

Hahnemann believed most thoroughly in the old adage, "Prove all things, hold fast that which is good." Unfortunately for the profession, the present generation has departed from this line of action.

Skepticism is rampant. Doubt possesses such a fascination that its luring light leads the masses to an intellectual nihilism. Doubt that leads simply to disbelief, belongs to the grossest of errors; it not only hinders research, but too often leads to the placing of stumbling blocks in the way of weaker brethren.

Doubt? Yes, but doubt to investigate, and let your investigations be thorough and your conclusions guided by judgment ripened through an enlightened experience.

Hahnemann devoted years of patient, painstaking research to the problems that confronted him before he made public the conclusions at which he arrived, thus conforming to the old saying, "Let your literary compositions be kept from the public eye for nine years." He published his first essay upon "A New Method for Ascertaining the Curative Powers of Drugs" in 1796, after seventeen years of observation and practice. The "Fragmenta," a direct outgrowth of this new method, appeared in 1805, and the "Materia Medica Pura," a continuation of the same line of research, was published in six volumes, between 1811 and 1821. This latter work was preceded by that masterpiece of medical philosophy, "The Organon," in 1810, and followed in 1828 by that crowning work, "The Chronic Diseases," presented to the profession after eleven years of research and study, bearing upon this phase of medicine. I mention these facts in passing to show how thoroughly matured was his work before he gave it to the profession. So accurate, indeed, was it all that not a characteristic symptom recorded by him has been discredited by any competent observer.

Just here a word upon the value of symptoms as guides to the selection of the curative agent. It is often asserted that Hahnemann laid too much stress upon symptoms, in that he considered them the only reliable guides in the selection of the curative agent.

In Section 18 of the Organon we read, "from this incontrovertible truth, that besides the totality of the symptoms it is impossible to discover any other manifestations by which diseases could express their need of relief, it unquestionably follows that the totality of the symptoms in each individual case of disease can be the

only indication to guide in the selection of the remedy.' In Section 6, however, he speaks of "morbid signs and symptoms," and of "deviations from the previous healthy condition of the patient, felt by him, and recognized upon him by his attendants, *and observed upon him by the physician.*" If we consider the thorough analysis of the symptoms and signs of disease intended by Hahnemann, and recall the fact that such analysis was designed *for the selection of the remedial agent*, we must admit that his views still hold good, despite all the advance made in pathology. For, notwithstanding the wonderful advancement in our knowledge of the physiologic functions of the various organs, and the equally marvellous advance in our knowledge of the morbid changes consequent upon disease, it still remains true that for therapeutic purposes the symptomatic picture presents the most reliable and specific likeness of each individual case of disease.

One of the most cogent reasons for insistance upon the importance of the symptoms, is found in the fact that drugs which have the power to induce very similar pathologic changes, prove curative only in markedly different symptomatic complexes. To illustrate: It is a well known fact, and readily demonstrated, that identical pathologic changes may result from the poisonous effects of many drugs of widely varying properties. Thus we find Aconite, Arsenicum, Bryonia and Phosphorus in toxic doses capable of inducing congestion, inflammation and the pain in the lungs, accompanied by a characteristic rise of temperature, cough and sputum. Now, though in each case the pathologic lung change may be practically the same, no experienced physician would consider these drugs as succedanea in such diseased state.

The pathologic change does indeed point more or less emphatically to a certain line of remedies; but the symptoms of the individual case remove it from such indeterminate class relationship, and place it in individual therapeutic remedial relationship with some one specific drug. The symptoms, we might say, define the personal equation of the patient and thus make possible a positive choice.

Without a perfected symptomatology based upon the Hahnemannian method of proving, such symptom portraiture would be impossible, lacking which, treatment must ever remain indefinite and empirical.

It might be well here to recall the fact that this method itself

would be inoperative had not the potential energy of the triturations and dilutions been discovered. To illustrate the importance of this feature, let me recall an incident: When Hahnemann wrote Hering of the wonderful powers of the Carbo vegetabilis, Hering promptly instituted some experiments with the lowest triturations, which failed to develop results. He wrote Hahnemann, who replied that the preparation was too low, and gave instructions to triturate higher and still higher. After the sixth trituration was employed, symptoms were developed, and in practice curative results were obtained.

In 1851, Jahr called attention to the fact that all poisonous drugs when given in crude doses produce very similar effects upon the human organism. "This," he says, "has its meaning for us in practice not as applied to the greater or less efficacy of the potencies, but as applied to the development of the peculiarities of the remedy, so that the higher we ascend the more clearly are the special and peculiar characteristics of the remedy manifested." His observations have been confirmed times without number by the best observers in our school. More recently confirmations have come from other sources. Thus, Sajous, one of the most astute observers of the old school, remarks upon the similarity of symptoms resultant upon the use of toxic doses of all poisons. In verification of his assertion he instances the action of many and widely different drugs, such as Aconite, Antimony, Arsenic, Belladonna, Camphor, Carbolic acid, Copper, Digitalis, Phosphorus and many others, each producing marked muscular weakness, lassitude, sense of general wretchedness, paralysis, abdominal pains, fever, difficult respiration, scanty urine, liquid, abundant stools, coma and convulsions.

Again, it is a well ascertained fact that poisons in large doses produce such similar, if not identical, effects upon the blood that it is difficult to distinguish between them. Sajous refers to this feature in the following words: "The toxic agents analyzed in Wood's Therapeutics represent all those in which reference to blood changes have been made, and we thus have ample evidence that all agents capable of acting as toxics, may give rise to disintegration of the blood similar to those which were herein described as being of suprarenal origin."

Another feature worthy of note is that the difference in effect of large and small doses is being emphasized by many observers in the old school ranks. Thus the difference between the observations of

Mosso and Delezene, upon the action of strychnine, has been attributed to the fact that the latter used smaller doses of strychnine than did the former, thus producing central contraction and peripheral dilation of the blood vessels, instead of central dilation and peripheral contraction, as observed by Mosso.

Despite such well authenticated facts, the illogical methods of medication so persistently adhered to by the rank and file of the old school tends toward the continued employment of the long established doses of the Pharmacopœia.

Hahnemann established beyond reasonable doubt the curative action of infinitesimal doses of properly prepared drugs. Recent observations by old school investigators have confirmed and emphasized the fact that infinitesimal quantities of given drugs have a most potent effect.

Thus, for instance, it has been proved that a drop of a 1-10000 solution of adrenalin is sufficient to blanch the conjunctiva; and further, this substance was found to be equally active as a blood pressure-raising substance, 1-200000 gramme intravenously injected into an adult being sufficient to produce a distinct effect.

A recent editorial in the Journal of the American Medical Association presents a review of some facts relative to the action of copper and its salts on certain organisms, calling attention to the remarkable efficacy of a solution of one part of the sulphate in 2,000,000 parts of water. Gildersleeve and Stewart have published reports of their investigations on the bactericidal action of copper and its compounds, especially with reference to the typhoid colon group. From these studies it appears that ten hours proved sufficient to destroy the life of such bacteria, the B. coli communis and the B. dysenteriæ being slightly more resistant." Stewart found "that in a one liter copper vessel, one part of copper to 4,000,000 of water was dissolved in three hours, and this amount of copper was sufficient to kill the added typhoid organisms in from one and three-quarters to two and one-half hours." We also find it stated that "water in reservoirs easily can be made safe by such treatment with copper."

Jackson reported before the New York section of the American Chemical Society that "the sulphate in dilution 1 to 8,000,000 administered once or twice a year, is sufficient to prevent all trouble from microscopic growths" in reservoirs, and "this dilution is so

great that in order to obtain a medicinal dose it would be necessary to drink forty gallons a day."

Is it not incomprehensible that with this startling evidence of the wonderful dynamic power of infinitesimal quantities of this drug no effort has been made by the old school to press to a definite solution the question of the action of equally minute doses upon the human organism.

Such infinitesimal quantities simply *dissolved* in water proving sufficient to kill bacteria, in a reservoir, is it unreasonable to suppose that the same, or even smaller quantities, if properly potentized, would prove potent when administered as curative agents in disease?

Hahnemann made the experiment, receiving an affirmative response when he made his provings of copper, nearly a century ago. He gave the results of his investigations to the profession in the third volume of the Chronic Diseases. In the pathogenesis of copper we find 387 recorded symptoms, the essential characteristics of which have been verified by hundreds of most trustworthy observers.

We must also note that Hahnemann was led by these provings to recommend the copper in the treatment of cholera; and when we recall the fact that Hahnemann looked upon the contagious matter of cholera as composed of myriads of invisible, probably animated, and perpetually reproductive beings, we find still another illustration of his wonderful grasp of the pathologic factors possible in disease.

An analysis of the symptoms of Camphor, Cuprum and Veratrum led Hahnemann to recommend their use in cholera, each in accordance with their characteristic symptomatic indications, long before he had an opportunity for personally treating a case of this disease.

The provings of these remedies present perfect pictures of cholera, each has extreme weakness, exhaustion, sunken eyes, bluish and cold face and hands, with coldness of the rest of the body, burning in the stomach and œsophagus, discouragement, anxiety, sense of suffocation, moaning, hoarseness, hippocratic face, cramp in the calves and other muscles—but, here the pictures begin to vary, each showing some characteristic individuality; thus Camphor, which is suited to the initial stage of the disease, has neither thirst, nausea, vomiting nor purging; whereas Cuprum, indicated later, has intense thirst, and when drinking the fluid descends to the œsophagus with a gurgling noise. Nausea is severe, but is relieved by drinking cold water. Vomiting of a watery fluid, mixed with whitish, yellowish or reddish flakes, is characteristic, and the stools, which are frequent, present

a very similar appearance. Veratrum has an equally intense thirst, but lacks the peculiar gurgling noise when swallowing noted under Cuprum. The nausea is intense, but instead of being relieved by drinking cold water it is markedly aggravated. The vomiting is severe, the vomited matter being acid or bitter, foamy white or yellowish green mucus, or black and bloody. The stools are watery, greenish and flaky, or white like rice water, and almost painless.

These remedies afford an excellent illustration of the difference between the pathologic similarity of the diseased individuals, from which standpoint all are equally indicated; and the true Hahnemannian similarity, in which the totality of the symptoms of the individual case must be accurately covered by the symptoms of the homœopathically indicated remedy. Herein lies one of the greatest benefits to the science of therapeutics; Hahnemann opened the way to a correct understanding of the individual characteristics of each proved remedy, and emphasized the importance of the true symptomatic similarity which must ever constitute the basis for the Homœopathic prescription.

True, the pathogenses wich he gave us are voluminous and difficult of mastery, but they represent the unalloyed effects of each proved drug, and are easily within the reach of every real student.

Hahnemann's work has been the object of much groundless and unreasoning censure by the ignorant and slothful, but on the other hand, it has been the source of unceasing comfort and ever increasing power to every true follower of his teachings. Our Materia Medica must ultimately afford material from which may be constructed a definite counterpart to each individual case of disease, and such totality will ever invariably correspond to the existing pathologic state.

Let it be remembered that by the term *similarity of symptoms* Hahnemann understood not merely the given sensation or condition, but he included location, aggravating and ameliorating circumstances and all concomitant conditions related to such sensation or condition.

This Hahnemann taught explicitly in the Organon and made accessible in the Materia Medica Pura and the Chronic Diseases.

A careful review of the work being done in the laboratories of the old school today accentuates Hahnemann's teachings in regard to the necessity for a thorough symptomatic proving of each drug incorporated in the Materia Medica. True, provings may be made

upon other lines, but the symptoms will ever remain the most reliable guide for the therapeutic selection of the curative agent. Again, laboratory investigations have given unmistakable proof in support of Hahnemann's assertion that crude drugs have such an overwhelming effect upon the various functions that all the finer distinguishing characteristics are positively lost—a demonstration of the fact that for guidance in the selection of the therapeutic remedial agent such provings are comparatively worthless.

Effects thus crudely portrayed fail to enable us to differentiate similar acting drugs, and as a result, even the semblance of a scientific prescription becomes utterly impossible. For Homœopathic application we must reach a knowledge of the finer dynamic action of each drug, and such is best expressed through the symptoms ,and is best obtained from provings of the potentized drug.

Even allopathic authorities recognize the effects of infinitesimal quantities, the 1-1000, 1-10000, 1-50000, 1-200000 of a gramme having produced marked physiologic effects.

They recognize the fact that so small a quantity of matter as may be dissolved by water from a gold or silver vessel may have a poisonous effect upon certain algæ. That there is a dynamic force in light varying to a degree according to its source. Phototherapy and radiotherapy are accepted as valuable additions to their means for combatting disease. Radium has added its wonders and given to the world an instance of tangible and measureable dynamic force, and of the comparatively infinite divisibility and permeability of matter, notwithstanding which materialism still maintains strong hold upon the masses.

The many points adduced bear evidence, however, to the fact that the old school are gradually awakening to a realization of the potency of the infinitesimals, and of the applicability of dynamic force independent of the quantitative relationship of matter. These facts are but added proofs of the soundness of the philosophy which Hahnemann taught, and of the reliability of the work which he wrought under such bitter trial and opposition.

Our Materia Medica is of inestimable worth in that it presents the pure effects only of the given drugs, and further, because it affords a brilliant example of the method for developing this department of medicine to its utmost limit.

The old school are fast appropriating every discovery which Hahnemann made. Ridicule and professional ostracism was his por-

tion, but now, guided by the exact method which he taught, these old opponents are being led to the adoption of his views. We find the law of similars recognized as a rule of practice; the nosodes which excited their wrath and most vituperative opposition have now become the corner-stone in their treatment of contagious and infectious diseases; the infinitesimals more recently have been received with a certain favor; and polypharmacy, which was denounced by Hahnemann as unscientific and irrational, is fast falling into disuse.

Leading investigators are accepting one or all of these fundamental truths, but we look and listen in vain for a word of recognition of the influence of Hahnemann in this far-reaching work of reform.

The mission of Homœopathy and its Materia Medica Pura is daily being accomplished. Thinking physicians are being aroused to a just appreciation of accurately conducted scientific investigation, realizing that every confirmed fact is but a link in the chain which ultimately must bind science, including medicine, into one generic whole.

Let the work wrought by Hahnemann be as a beacon light to every conscientious worker in the field of medicine, guiding the investigator into all truth. Let it excite in every conscientious physician a spirit of emulation and a heartfelt devotion to duty, then shall our school have accomplished its mission and Hahnemann's name will be enshrined with the greatest discoverers in the field of medicine.

DRUG PATHOGENESIS, SYMPTOMATOLOGY AND THERAPEUTICS.

C. S. MIDDLETON, M. D., PHILADELPHIA.

Pathogenesis is really a high sounding word, and when used in connection with the proving of drugs, it is full of significance to a Homœopath, so is symptomatology, as also therapeutics, and how thoroughly they are linked together you all know.

It is just possible that there may be some confusion in the understanding of the terms as we have used them, as there cannot be a pathogenesis developed without symptoms.

The definition of pathogenesis is "the development of diseases"

if produced by drugs. Of course, we have drug pathogenesis, or drug disease.

Symptomatology is defined as "that branch of pathology which treats of the symptoms of disease; the doctrine of symptoms."

It would seem to me that the terms have been used more or less synonymously, evinced even in the Cyclopædia of Drug Pathogenesis, published a few years ago by the joint efforts of the British Homœopathic Society and the American Institute of Homœopathy.

It would appear, however, that drug pathogenesis should imply something more and of greater depth of action than mere symptomatology would lead us to infer during the proving of drugs, if we refer to the general acceptance of the terms. Indeed this must be so if we compare the provings of material doses with those of the potentized drug for obvious reasons.

In the study of the *Materia Medica* in years gone by, however, symptomatology was presented to the student, by even professors of this important branch of medicine in some of the colleges, as the great highway by which only could we attain the skill to apply practical therapeutics. How sadly those professors were mistaken, who seemed to have forgotten, or did not know, that the pathogenetic power of a drug from which *symptomatology* finally bloomed forth as a beautiful rose from its stem was the groundwork of our *Materia Medica*, by the knowledge of which, through proper provings, our therapeutics have gained such renown.

We Homœopaths have been unjustly accused of ignoring the science of pathology in the treatment of diseases, and to a certain extent this was true amongst the class of medical men above alluded to; but the most natural thing in the world for a Homœopathic physician to do, who has always studied his *Materia Medica from a pathogenetic standpoint*, is to observe his patient from the standpoint of the pathologist, drawing a picture of the *disease* in his mind, selecting his drugs from a class which would cause a similar pathologic condition, and then to seek for the symptoms suiting the special and peculiar manifestations of the patient. Thus our therapeutics becomes a science, and our cures rapid and satisfactory. In the sense of a pathologist, as well as in other ways, the Homœopath is superior to his allopathic brother, inasmuch as the latter, no matter how skillful a pathologist he may be, falls behind the Homœopath in his good results, because his therapeutics are often based upon false premises, and his results are often failures, be-

cause he has tried to produce certain conditions leading to health through imperfect ideas contrary to physiology and nature, and therefore fails. From this excusable digression let us return to the assertion of the greater value of our *Materia Medica* when studied from the standpoint of a drug pathogenesis; this is, indeed, where Hahnemann began with his proving of Cinchona bark.

That this is true, take, for instance, the example of such drugs as are most potent in causing pathologic conditions, say, Arsenicum album and Mercurius cor., etc.; how much more readily do we learn their action, on what organs and tissues they primarily expend their power, their symptoms, and consequently their therapeutic value, and, if you please, how surely can we predict a curative reaction when applied according to the law of Similia. The late Dr. Hering says, in Guiding Symptoms, that "the administration of Arsenicum is often more disappointing than that of any other drug, the cause of which lies in *too numerous collection of poisonings and the lack of symptoms produced by higher potencies*" (italics ours). While we do not intend to introduce the question of provings with high potencies, nevertheless Dr. Hering's position is antagonistic to the latest developments relating to provings with high potencies, as witness the celebrated test applied by the late Dr. T. F. Allen, called, I think, the "Milwaukee" test, in which instance not one of the provers were able to detect the medicated pellets, all of them having selected the vials containing the blank pellets as having produced the symptoms they had recorded. Witness also the fact that in the Cyclopædia of Drug Pathogenesis, before alluded to, the editors and compilers agreed to accept "symptoms reported as coming from attenuations above the 12th decimal only when in accord with symptoms from attenuations below." There are drugs of limited powers, of course, the knowledge of the action of which we can ascertain only by a few symptoms they can produce through the disturbance of certain functions, very trivial in character and short in duration, yet they fill a niche in our armamentarium which it would be inconvenient at times to do without.

The point we wish to impress is that in a proving the more we get a drug pathogenesis, and thus learn the "pathology" of that drug and its symptoms as related to that particular pathogenesis, the more valuable does that drug become for us in the treatment of diseases, and the more certain can we prognosticate its therapeutic

value. It clearly follows, then, that the learning of the *Materia Medica* from the foundation of drug pathogenesis up through the gradations of the more moderate symptoms produced by the same drug in less material doses, or potency, to a limited degree, is the only satisfactory way to acquire a working knowledge for all purposes.

Every drug has its affinity and produces more effect upon the organs and tissues wherein that affinity lies; therefore, we can trace even those conditions which are often termed reflex, or collateral, back to their foundation source; especially is this true of those drugs which have a profound action upon the human system.

Diseases are of a pathological character more or less severe, according to circumstances, and we can cure them only with drugs which will produce a drug pathogenesis, similar to the dynamic (?) pathology we meet in the sick; therefore, drugs proven to the extent of pathogenesis will prove of more value in therapeutics than those which expend only a part of their action, owing to a want of power to produce a train of pathologic symptoms.

We believe that potencies of drugs are much more efficient in the treatment of diseases than in producing upon the healthy the symptoms we need in their indications.

Thus, then, if we study the action of drugs from their poisonous effects through post mortems, etc., from the systematic provings to the extent of drug pathogenesis, noting all the direct and collateral conditions, such as affect the secretions and excretions from the body; provings with potencies to a limited degree, as before remarked, to ascertain some of the milder and less intense conditions, we would possess a therapeutic armamentarium which, when skillfully applied, would still more brilliantly emblazon the divine dispensation of Homœopathy, so that its light would never become extinct so long as suffering humanity exists.

INDICATIONS FOR THE INDICATED REMEDY.

O. H. PAXSON, M. D., PHILADELPHIA.

What is meant by the indicated remedy?

It may be defined in more than one way.

According to the Century dictionary the word "indicated" means pointed out, suggested or hinted, as a falling barometer indicates rain, and certain symptoms indicate certain remedies. Rain does not always fall with a falling barometer; neither is a drug to be always prescribed no matter how similar the symptoms of the drug and patient. A drop of pus in the alveolar mucous membrane will cause heat, redness, swelling, throbbing pains, flushed face, dry skin, etc., sure indications of Belladonna, but the true indications are for a curved bistoury and a puncture of the abscess. Again the indicated remedy has been defined as a single drug. One, and only one, is the high standard to which we should all strive for.

It is not known whether this expression, "the indicated remedy," originated with Hahnemann, at least, I have not found it in any of the translations of his writings that I have read. It very likely has been formulated by one of his followers. Wherever it may have originated it is now commonly accepted, and it is taught in the many Homœopathic colleges by the chairs of Materia Medica and therapeutics as the proper term for the remedy that is prescribed according to Homœopathic principles.

From the beginning of medicine to the present time all physicians have been in search of the indicated remedy, *i. e.*, the one remedy or the combination of one or more drugs that would cure their patient.

The interpretation of this expression at this day calls for a broad and liberal definition.

According to our belief every time we prescribe we have made such a selection. If we were infallible, and, if it were also true that the indicated remedy was one drug, and one only, our duty would be complete, and the results sure when we, after careful deliberation, had prescribed according to the best of our ability. Theoretically, this may be true, but practically it is either true, partially true, or wholly wrong.

The indicated remedy selected in the narrowest way, *i. e.*, by

matching the symptoms of the patient with the symptoms that are recorded in the Materia Medica may prove to be curative completely and wonderfully so, and you all have had many examples of this fact. Belladonna is a remedy that may be cited as frequently making or assisting in the cure of a case with the single remedy. Given a patient with an acute attack from some infection, with fever, skin hot and burning, face flushed, eyes bright, restlessness, starting or twitching in the sleep, and there is no uncertainty in our minds as to the remedy or the result after it is taken. Belladonna cures in such instances so promptly that many will hardly believe they have been sick.

It is not infrequent that the remedy fails or but partially cures some of the symptoms for which it was prescribed, and a different remedy is required to complete the cure. It is not unusual to see this kind of a cure in a case of typhoid fever where the early symptoms point so clearly to Bryonia, and yet without the patient becoming well these symptoms all disappear and different ones supervene, calling most positively for another drug like Hyoscyamus perhaps, this in turn removing the symptoms it was prescribed for but not curing the patient, for very likely a condition indicating Phosphoric ac. follows, and the third remedy is prescribed in its turn, and finally the disease has reached its termination, and we can say the patient is well; but the credit does not belong to one drug alone, it belongs to all three, nor should one drug receive greater credit than the other, even though one was helpful at the most dangerous period of the disease.

The indicated remedy when selected by the similar symptoms alone will sometimes fail in its action, not because it is not the proper remedy, but because there are other factors or indications to be considered, as, for instance, in this case of Miss C., who was sent to the Hahnemann Hospital with a history of inability to properly digest her food. As this condition had existed for some time she was emaciated and somewhat cachectic. She had been carefully dieted and as carefully prescribed for, so that we believed her remedy had been properly selected by her physician at home.

Miss C. entered the hospital in July with a history of being sick in January, 1904, with ulcerative gastritis for about three weeks. From that time until April, 1905, she was in bed more or less with the same trouble. Seven weeks ago, about July 9th, she com-

menced vomiting, and could not retain any food. Every few days a severe headache comes on with "nervous" symptoms.

The bowels are usually constipated. There was pain in the left side of epigastric region, which at times was felt in the back as if it went directly through from the stomach. Blood has been vomited at times, and at the same time the stools were black.

With this history she entered the hospital July 28th, after a journey of several hours from her home in Tyrone.

Although a young woman of 24 years of age she looked like a child of fifteen, she was so small and thin. Emaciation and cachexia were also present.

The excitement and weariness of unusual travelling brought on one of her usual headaches, which she described as beginning in the back of the neck and going forward to the frontal region, with some relief from lying down. The headache is also worse at night until after midnight. Unable to lie upon the left side because of the pain there. Shortness of breath.

Treatment began with Ewald's test meal of bread and tea. Afterwards she had considerable distress in the stomach from it, but did not vomit.

Slept well in naps that night, the nurse reports.

July 29th, gastric lavage was ordered and to be followed by six ounces of milk through the tubes before it was withdrawn. The object of feeding the milk in this manner was to avoid the nausea that followed the taking of it in the usual way by the mouth. Several hours after was nauseated and very short of breath.

July 30th, lavage of the stomach followed by nine ounces of milk introduced through the tube. It was followed by pain and soreness in the stomach some time afterwards.

July 31st, before the lavage this day a large amount of greenish-yellow fluid with some curds and mucus was first taken from the stomach. Afterwards eight ounces of milk was fed through the tube. Vomiting followed accompanied with much nausea.

Until this time she had not received any internal medicine.

Arsenicum was so well indicated that it was ordered to be given in the 6x, one minim every hour.

Her weight at this time was 56½ pounds.

Improvement began at once in her ability to take food by the mouth with less nausea and pain and with more desire for it.

This improvement continued, and when she was weighed, August

8th, she had gained ten pounds, or about a pound daily since admission. August 12th her weight was 69 1-3 pounds; August 23d, 72½ pounds, and August 29th, 77¾ pounds. She left the hospital September 5th, after being there forty days, and having gained 21¾ pounds in that time.

In this instance Arsenicum was the remedy indicated. It had been used before, I was told, but had not given the relief and improvement that followed its use in the hospital. It was evident to my mind that it was the lavage that was necessary, with the diet and nursing, that enabled the Arsenicum to do its work properly. In other words, diet, lavage and nursing were the indications that the indicated remedy needed.

The diagnosis was dilatation of the stomach with erosion and possibly ulceration.

The indications for the indicated remedy are more than is to be found in any book of Materia Medica. In this instance it included the lavage that was used. There are some who would dispute as to which should receive the credit, the lavage or the remedy. Neither was entitled to it singly, it was only in combination that such a good result was obtained.

The point that I would especially make is, that where the symptoms, after a careful study of the case, point to a certain remedy, it is the one to give, to persist in giving, and not to change it for another one without first making use of some simple method of treatment that will not conflict with the dynamic effect of the drug, but will aid the drug in its work. Because of a failure to recognize this fact the condemnation that falls upon Homœopathy is often unwarranted.

The young man starting out as a physician, fresh from college, has this subject presented to him, and oftentimes painfully so, as we who are not so far ahead of him on the road can tell.

A number of each year's graduates from their deep interest and study of their Materia Medica endeavor most faithfully to follow the teachings they have received upon this subject.

Some are like the wheat in the parable, which was sown upon stony ground, it grew rapidly yet withered in a day because it had not sufficient root; these are they who have memorized many symptoms, and who, thinking drug action was the only method of cure, have neglected or have disliked to think of any other means as being necessary in the treatment of a patient.

They are striving to be loyal to Homœopathy. It is their belief that the drug when carefully selected by the symptoms that belong to its pathogenesis and given to a patient with similar symptoms, he or she will be cured at once. To act otherwise would be treason. Yet we all know that sooner or later disappointment comes to these men, and with it temptation and yielding, and in the end they are as unprofitable to Homœopathy as is the withered wheat to the farmer.

Again, there are some like to the wheat sown upon a light soil, who are all the time complaining of the difficulties in studying the Materia Medica. They study the remedy and select it by first diagnosing the case, right or wrong, and then prescribe accordingly. They are never certain of their results, and are as likely to ascribe their success to their methods and their mannerisms as to their medication.

There are a few who, like the seed sown on good ground, bring forth an hundredfold. They are the ones who have enthusiastically studied at college the Materia Medica and the diseases of the human body in all its phases. They have ever been willing to listen to others, believing in the honesty and sincerity of their fellow practitioners, willing to accept a fact or truth by whomsoever found; they are willing to use and to seek out new methods of determining disease; they make use of all the well tried adjuvants in the cure of disease, whether it be mechanical appliances, atmospheric conditions, climatic changes, electricity, external applications, and even the internal use of drugs at times, which he knows or believes will help some perverted function to be restored to an overloaded organ, and yet with all this giving his principal thought to the selection of a remedy based upon the principle of Hahnemann's Homœopathy. Who likens the adjuvants he uses to the instruments in the hands of a master, a help to the result but not the result itself. Who, when failure comes to him, does not become despondent, distrustful and demoralized, but accepts it as a stepping stone to reach a truer light. These, I say, are those who appreciate the fact that there are indications for the indicated remedy other than those found in the Materia Medica. That there are many of them in the profession I most sincerely believe, and that too often, unfortunately, they are the silent ones.

SOME OBSERVATIONS CONCERNING MATERIA MEDICA AND ITS TEACHING.

C. C. RINEHART, M. D., PITTSBURG.

The beginner in the study of Materia Medica is met on the threshold with the great volume of symptoms recorded for each drug he is called upon to consider, and, as the immensity of the task dawns upon him, he is filled with dismay, and is discouraged at the start, feeling certain that to gain even a working knowledge of the Materia Medica is a Herculean task, which indeed it is.

Fortunately, each remedy has a number of keynotes, which, if properly mastered, will almost infallibly point to the proper remedy for any one case. And a careful study of the remedy in our Encyclopædic Materia Medica will prove the correctness of the choice. Our larger Materia Medicas are so rich that it is impossible to use them save as books of reference, where they are invaluable and beyond all praise; but for the busy workman they need to be boiled down to a point that will bring the material before him in such a way that it may be used at the bedside or in the office.

A delightful step in this direction is that excellent little brochure, "Leaders in Homœopathic Therapeutics," by Dr. E. B. Nash, which gives to us in an excellent way Dr. Nash's valuable experiences with remedies and the indications upon which they were given. It seems to me that we need more books of this character, not because they may take the place of the larger books on the subject, but because they are such efficient helps in arriving at the proper remedy in a given case. Each remedy in our Materia Medica has an individuality, so to speak, in which it differs from all other remedies.

Finger boards that point the way to the proper selection. It may have many symptoms in common with other remedies of its class, and even out of its class, but the characteristic symptoms are its own. For example, take Bell., Hyos. and Stramonium. These remedies are very closely related and have many symptoms, but each has characteristic symptoms by which it may easily be differentiated from the others. Very many of our remedies move along on nearly parallel lines until they come to a point at which they diverge, and these divergencies are the characteristic symptoms that distinguish the drug from any other. Many of our drugs have

great restlessness in their pathogenesis, such as Acon., Arsen., Eupat., Rhus, Baptisia, and a host of others; these, however, will illustrate what I mean. Now Acon. has the restlessness of a sthenic fever, restless because the patient feels too warm, because the very activity of the fever produces conditions that make it necessary to change position constantly, must be constantly upon the move. With this restlessness there is great anxiety and fear of death.

Arsen. is restless, but the restlessness is caused by extreme prostration, and the anguish produced by this condition. The patient may be too weak to move the extremities, but moves the head constantly from side to side.

Eupat. has extreme restlessness with pains deep in the bones, a sensation as though the bones were broken, but the constant motion brings no relief.

Rhux tox. is very restless, patient tosses from side to side, generally to relieve pain in the extremities, but is even restless when unconscious of pain, relieved by motion is characteristic of the remedy.

Baptisia is another very restless remedy. The patient is sore and pained all over as if bruised. And as though broken to pieces; must move about to get the pieces together.

Many of our remedies are aggravated by motion; most prominent among these is that grand old polychrest, Bryonia, and in passing would say that I always feel glad when I can get Bry. well indicated, as it does its work so certainly and well. Bryonia is characterized by stitching pains made worse by the least motion. Here Kali carb. divides honors with it, but the Bry. pains are markedly aggravated by the least motion, while those of Kail carb. are nearly constant regardless of the motion.

Ferrum phos. is much aggravated by motion, but comes earlier than Bry., being useful with Acon. at the very beginning of inflammatory attack.

Comparisons of this kind might be proliferated to interminable length, but the object of this paper is not to elaborate the differentiations that may be made between drugs. It has for its object an endeavor to induce the professors and lecturers on Materia Medica in our colleges to bring the splendid material of which our Materia Medica is composed before the student in such a way that he may be able to use it when called upon to treat the sick. The study of

Materia Medica is capable of being made as interesting as any branch of medicine. Our lamented Farrington gave instructions in Materia Medica in such a way that his classes never failed to give him the most earnest attention, and were able to profit by it when brought in contact with the sick; and his book upon the subject is as interesting to read as a novel. Why is it that the graduates who come to serve in our hospitals nowadays have so little knowledge of the splendid drugs with which our Materia Medica is crowded? Why is it that they all have such a leaning toward surgery? Can it be that they prefer rather to maim a man than to cure him? Surgery is the opprobrium of medicine, the acknowledgment of defeat. A case at all curable with medicine should not be turned over to the surgeon until every possibility of cure by medicine has been exhausted. Surgery at its best is the mutilation of the patient, and should be the last resort rather than the first thing to be thought of in the treatment of a case.

It would seem that, through the God-given law that was given to us through Hahnemann, we should have the means of curing many cases that now go to the surgeon for relief, and we have such means and remedies that, when properly given, will do the next thing to raising the dead. What we need is a better knowledge of them and better means of recognizing the finger boards that point to one remedy rather than another. But instead of each practitioner being compelled to pick these out for himself, he should have, at the start of his career, a knowledge of these indications drilled into him by the professor of Materia Medica at his college and during his course. It is not sufficient nor is it profitable that the professor should read over the symptoms of the drugs as found in our works on Materia Medica under the rubrics, mind and disposition; head, internal and external, etc. These are excellent, indeed, indispensable, in books of reference, but utterly useless to the student during his college course, unless special emphasis is laid upon those indications that mark the drug with its own individuality. I have been told by students of one of our professors of Materia Medica, who takes up the whole hour, which should be devoted to careful elucidation of the medicines to be lectured upon, in telling the class what a great fellow he is and how successfully he has given Sulphur to a case because the man didn't want on a certain occasion to go in swimming, using the hour rightfully belonging to the students in self-glorification.

I have been told by students who attended the course that the professor of Materia Medica of one of our colleges occupied every lecture hour from Christmas to the end of the term lecturing on Sulphur and water. Now Sulphur is a very valuable remedy and one of exceeding usefulness, and one that should be thoroughly understood, but it would seem that one or two hours should be sufficient to teach the student how and when to use it in practice, and what symptoms point to its use. We none of us know as much about Sulphur as we have written in our works on Materia Medica, so why not point to the method of using the remedy in a way that will be direct and useful, and allow the student to consult his text books for a more exhaustive study. Besides, it is practicing a fraud upon a student not to give him practical knowledge or drugs, for this he is entitled to have, and he pays his money and devotes his time at a college with the end in view of acquiring such a knowledge of the different branches that he shall be fitted to practice medicine among the people. Materia Medica and its application under the Homœopathic law is that branch of medicine that distinguishes ours from other schools of practice, and is the branch that should be most carefully taught. Taught in such a way that the student should be able to give a good account of himself when called upon to treat the sick, or when asked to name the remedy. When the unmistakable symptoms of a drug are developed during examination of a patient he should be able to name the remedy promptly and not be compelled to acknowledge his incapacity to answer the question, because these things had not been impressed upon him during his college course. We require and should have thorough and efficient teaching of Materia Medica, a teaching not comprehending the entire symptomatology of a drug, but one that embraces all those symptoms that point to the remedy—the keynotes, the modalities, the symptoms that make a picture of the drug. The more exhaustive study should be left for the student after his graduation.

I most thoroughly believe that in the Homœopathic law we have the only scientific method of drug application, and that failures to cure are due entirely to ignorance and the limitation of the Materia Medica. The Materia Medica is not as yet completed, and our ignorance of it, even imperfect as it is, is lamentable. Still we are able to make many astonishing cures, and these will increase as our knowledge increases.

In illustration of the value of keynotes in selecting the remedy I will cite a number of cases where the keynote, or characteristic symptom, gave the remedy which in my opinion saved the life of the patient.

Not very long ago I was requested by a brother practitioner over the telephone to see a case of pneumonia with him as soon as possible. I went to the house and the doctor me at the door with the salutation, "Doctor, it's no use; the boy is dying." Having come quite a little distance I did not feel like going away without seeing the patient. So we we went upstairs and found the young man in a cold, clammy sweat, hands and arms cold and clammy, finger nails blue, pulse at the wrist almost gone and very fast, breathing very rapid and superficial; in fact, every evidence of approaching dissolution. After examining his chest I drew the covers up over him and he in a feeble way immediately pushed them off again. Now this is a keynote for Secale, and Secale was given, and within half an hour the pulse had returned at the wrist, the circulation becoming re-established, the clammy perspiration ceased and the young man went along to perfect recovery in due time. Without the Secale I feel certain that he could not have lived more than an hour or two, and without the keynote we should not have given the Secale.

The next case was also a case of pneumonia in a child three (3) or four (4) years old, to which I was also called in consultation. Was called to see the case on a Saturday night, or Sunday morning rather, very early, shortly after midnight. Found the child very sick, temperature very high, pulse and respiration very rapid, cough frequent and painful, and when questioning the mother about the case, she said, "Doctor, why is it that when she coughs her breath is so bad?" I asked her if she noticed it as being bad when she was not coughing; she replied that it was not, and examination proved the truth of what she said, for when the child was not coughing the breath was not offensive, but when she coughed it had almost a putrid odor. This symptom, as you all know, comes only under one drug, namely, Capsicum. Capsicum was given and the improvement was immediate, for by morning the child was out of danger and recovery was rapid and continuous. Now would the child have gotten well so promptly without the Capsicum? I think not, and without a knowledge of this keynote Capsicum would certainly not have been given. Capsicum covered the case

and was the only remedy for it, but without this keynote no one would have thought of giving it rather than other remedies more frequently given in pneumonia.

DISCUSSION.

DR. S. W. S. DINSMORE: I do not wish to discuss Dr. Rinehart's paper. I would just like to report a case that was under my care some time ago to confirm the Lachesis symptoms. A few months ago I was called to see the wife of a merchant in our community. She was just passing through the menopause, and had been under the care of a very intelligent physician for more than a year. She had not menstruated during that year, but within the last couple of months before I was called to see her she had abscesses or carbuncles break out on her face. She had the characteristic symptoms of always complaining of being compressed about her neck. Then abscesses would break out. There came out with the pus dark clots. When I first saw that woman and talked to her it did not occur to me to give her Lachesis. She had burning pains in her stomach. All symptoms were worse in winter. It was winter and the windows were wide open. The husband said, "Doctor, what is going to become of my wife? I don't see how we can live together. I have been a true husband to that woman, yet in the last six or seven months she is suspicious and jealous." I instantly thought of Lachesis, and I am happy to say she entirely recovered under its administration and has good health and is as good a wife as ever she was.

DR. AUG. KORNDŒRFER, SR.: Having been a student of this branch of medicine forty odd years, I endorse every word Dr. Rinehart has said in regard, not to a keynote system, for I do not believe in keynotes, but to characteristics. I think Hahnemann was right when he wrote those words, that the symptoms that were marked, peculiar, individual and characteristic, were the symptoms which should guide us in the selection of a remedy. He said all remedies have symptoms that are nearly akin. Every remedy may have a headache, a pain in the chest, or in any other part of the body, but it is only when that headache is specialized by some peculiarity that gives it a characteristic and distinctive individualty, by which it may be recognized as different from every other headache, that the headache symptom becomes valuable in that given drug. Not that

we could leave out all the other symptoms, but if I were to make a likeness of any member sitting with us today in crayon I could make that likeness in three lines and every one of you would say promptly, "That is so and so." You cannot help recognize it. Look at the nose, the mouth, the eye. That is the man, that is the woman. Three lines are enough to give that picture so that you recognize it as of that particular person, but that is not a finished picture. That is a crude piece of work. You would not want to hang that up as a sample of fine art. The fine art of prescribing requires that the physician should understand every line that goes to make up the picture of the drug, as well as the picture of the disease, but he should not be under the necessity of knowing every remedy in that way in order to be a successful practitioner. Time would not permit that he should master his Materia Medica in that way, and there must be some other way by which we can utilize it, and the thought suggested by Dr. Rinehart, carried out by Hahnemann and many from his time to the present, through the later keynote system of Dr. Guernsey, the guiding symptom system of Dr. Hering and the characteristics given by others, supplies the want. The method may vary with the individual peculiarities of the physician or student in study, but the secret is to get those peculiar symptoms which characterize the drug among all other drugs, so that you can distinguish it at a moment's notice as soon as you see your patient. When Scott was president of the Society which is now the Central Verein of Germany, he had a very sick daughter at home. He mentioned the fact and asked one of the physicians present to accompany him to the house to see this case and prescribe for it. Old Dr. Gross, I think, and several younger men said, "Let us go along and see the old fellow sit down and take a sketchof that patient's history from the time she was born until the time she dies. She will die in all probability before she gives the decsription." She was in the last stages of typhoid, with that peculiar expression of countenance which is almost pathognomonic of the remedy. Instead of asking a question he had obtained the history as he went along. He turned to the father and said, "Have you given her Camphor?" "No; I had not thought of it." He said, "Give it." It was given. The next day the patient was on a fair road to recovery.

CLINICAL VERIFICATION OF DRUG ACTION.

GEO. W. SMITH, M. D., PHILADELPHIA.

We are told that this is an age of progress and that in no department is this progress made more manifest than in that of medicine. This, to a certain extent, is true, especially in surgery and many of the specialties; but we can scarcely believe such to be the case as regards the proper selection and administration of drugs, especially as far as Homœopathy is concerned. By many we are told that the days of Homœopathy are numbered; that it will soon be relegated to the "has beens;" that the science of medicine has progressed so rapidly and so far as to preclude the possibility of any ism or pathy to continue to exist, and that the practitioner must be a doctor in the fullest sense of the word; that it is his duty to *cure* his patients and that Homœopathy is unable to do this and must make way for more modern science, etc., etc. Now is this the case in truth? Is not Homœopathy a *true* science, and must not this truth be as efficacious to-day as it has ever been in the past, and will it not continue to shine as brightly in the future as it has ever done in that past? If it were true in the days of Hahnemann and of his illustrious followers who had such extensive and brilliant results, why should we not have the same success to-day, and why should not those who follow us have the same good fortune in the future? Simply because we are grasping for the unseen and unproven and are unwilling to examine and study properly the great inheritance that has been given to us. If we would do this, accept this truth and prescribe as carefully and conscientiously as our predecessors, we would find our successes as flattering and gratifying. And if we would truthfully compare these results with those of others who have strayed away from the great fundamental principle, and would lay these facts honestly before the eyes of the profession, even the doubting Thomases might be convinced that Homœopathy is still, as it has always been in the past and shall continue to be in the future, the true science of medicine. Our predecessors proved this to be the case and in nearly all our former literature on the subject we are amazed with the grand results that were constantly cited and asserted by men of irreproachable standing and veracity and who stood high among the leaders of medical science in their day; prov-

ing the great benefits which uniformly attended the proper administration of medicine according to the law of similars. It scarcely behooves the writer of this paper to consume valuable time with the recitals of these statistical facts, and I will simply give a few of these observations to prove what I state, and afterwards a few illustrations from my own personal observation to prove the clinical verification of drug action. In glancing over the statistics of hospital experience in one of these old books, I find that in four of the largest cities in Europe during the prevalence of cholera and from the year 1833 to 1840, inclusive, the allopathic institutions lost by death 11 per cent., or one out of every nine patients, whilst the Homœopathic institutions lost only 5 per cent., or one out of every twenty. In another old book I found that Dr. Routh, an allopathic physician, discovered that in the institutions under his observation and of others which he compiled from, that in pneumonia they lost 23 per cent., while Homœopathy lost only 5 per cent. In pleurisy they lost 13 per cent., Homœopathy 3 per cent. Peritonitis they lost 13 per cent., Homœopathy 4 per cent. Dysentery they lost 22 per cent., Homœopathy 3 per cent. Fevers, excluding typhus, they lost 9 per cent., Homœopathy 2 per cent. Typhus they lost 16 per cent., Homœopathy 14 per cent., and in Hepatitis they lost 14 per cent. and Homœopathy not a single case. In seven of the largest cities in Europe the mortality of the allopathic hospitals was 10.5 per cent., whilst that of the Homœopathic institutions during the same period was 4.4 per cent. These statistics are ancient history and may be scoffed at by some, but those doctors certainly had good comparative success, and if their diagnoses were not always correct the same might be said of both schools, and those who prescribed according to the symptoms of drug provings most certainly had much better success than those who prescribed according to the old rules of the administration of drugs; and if such was the case in years long past and at a time when Homœopathy was first struggling for an existence, and when comparatively few of our remedies were proven, how much more successful should be the honest prescriber of the present time, if he were to exert the same carful attention to the study of the great truth, and with the advance which has been made in the valuable drugs that have been discovered and proven since that day. But, as I stated before, we can do the most good by truthfully giving out some of our own observations, and although we may have numerous failures, yet still there is not one

among us who has honestly administered medicine according to the great law of similars but could enumerate many cases of brilliant cures even when death appeared almost inevitable. I will not tax your time and patience by enumerating any great number of cases, but will simply give you a very few where the medicine administered according to the drug proving was atended with complete success.

During my course in college we frequently attended the clinics of the allopathic hospitals, as they had much more and better material than we were able to secure at our college and hospital on Filbert street. At one of these clinics a patient was presented who was a young woman about twenty-two years of age, rather stout and apparently perfectly healthy in appearance. Auburn hair and very fair skin. Upon uncovering her back the lecturer showed that it was literally covered with a very red and angry looking eruption, and as she had no other ailments he proposed to show us how quickly the eruption would disappear under the administration of the Bi-Chromate of potash.

This he ordered to be given in very large doses and promised to present the case again in a week's time. This was done, and greatly to our astonishment the eruption had completely disappeared, but she had developed a terrific cough, apparently showing that the exudate had receded at the expense of some much more important organ. He continued the prescription, promising to inform us how the case progressed, but before the expiration of another week she was dead. This impressed me very strongly, as I considered it was a proving of the drug action. Some years after that I was called to see a child that was apparently dying from croup; his face was purplish in appearance, eyes protruding and congested, strangling and croupy cough, with stringy and viscid expectoration, tongue very red and swollen. Great prostration, etc., giving a complete picture of Kali bich., and, remembering the case that I had seen during my student days, I told the family that I thought it was a case of suppressed eruption, and accordingly prescribed Kali bich., third decimal triburation, in watetr, one spoonful every five minutes on account of the great severity of the attack, and in less than one half hour the body broke out all over with a profuse eruption of measles, after which I lengthened out the administration of the drug to intervals of one hour and the child soon made a most happy recovery. Since then I have verified this set of symptoms very frequently, and more especially one year when the measles produced quite a heavy

percentage of mortality in Philadelphia, in which most of these symptoms manifested themselves, and fortunately I did not lose a single case.

On July 3 of the present year a boy, thirteen years of age was admitted to our hospital suffering with what was diagnosed as typhoid. Temperature ranged from 100.2° to 105.4° for five weeks, the remissions being more marked under the administration of various drugs which the symptoms seemed to indicate. When I took charge of the case I found the boy to be almost comatose, breath very offensive, dull, stupefied look, did not wish to be disturbed bowels constipated, nervous symptoms, tremor of hands and feet. Respiration from 28 to 34, pulse thin and irregular, bronchial breathing markedly exaggerated, sub-crepitant rales, with dulness on percussion. Right intra-clavicular region showed symptoms of tuberculosis, but the diagnosis was now made of typhoid pneumonia involving the right lung.

On July 1st I gave Theridion, 30th, in water, one spoonful every two hours, and in two days the temperature came down to normal and has continued so since that time and the patient improved so rapidly that he was apparently perfectly well in a few weeks.

For over twenty-five years I have enjoyed the privilege of attending a family in which the mother is an old lady now, nearly ninety-four years of age. In the winter of 1903 she had a very violent attack of pneumonia, which developed so rapidly that in a short time she became almost moribund. One evening I was hastily summoned and found her in an apparently dying condition. Her face was cold and bluish in appearance, limbs cold below the knees, pulse intermittent and thready, some cold sweat, comatose condition, breath almost imperceptible and cold, life almost extinct, but seemed to require air, so that they were constantly fanning her. I administered Carbo veg. in water, merely wetting the mouth with it at first, as she was unable to swallow, but before morning she began to rally somewhat and continued to improve rapidly. She recovered completely from the pneumonia and spent the greater part of the following summer at a seaside resort. Last winter she had another attack, but not so severe, and as she presented the symptoms of Carbo veg. again, but not in such an aggravated condition, its administration soon secured a most happy result, so that at the present

time she is remarkably strong and hearty for one of her extreme age.

Last spring I was summoned to see another old lady, eighty-four years of age, who the family told me was dying. When I arrived I found pretty much the same symptoms and condition as above narrated, and upon inquiry into the cause I found it to have been occasioned apparently from an attack of acute indigestion, as she had partaken of rather an imprudent meal the evening before. Carbo veg. relieved this case and she was soon around again, and at the present time she is enjoying the seaside at Asbury Park. I cited these two cases merely to show that the same prescription relieved both cases, which, although produced from entirely different causes, yet when the symptoms were the same the remedy relieves regardless of the name of the diseases which causes these symptoms.

But it is unnecessary for me to continue to enumerate cases, which I could readily do for some time and also which most of you who have practiced Homœopathy for any length of time could supplement almost indefinitely. My object is simply to show that the clinical experience of an honest prescriber, conscientiously expressed, verifies the value of prescribing according to the provings of drugs, and if we will add our little mite of information to that which is already recorded we can prove beyond a doubt that Homœopathy is not dead, nor likely to die, but will continue to flourish, giving health and strength to many who are sick and suffering, and proving beyond a doubt that it is the only true system of drug administration. In concluding this paper I want to make a plea for practical clinical experience as contrasted with theory and hypothesis. The older doctors, whose great work I have cited with statistics, mostly from old school scources, had been themselves old school doctors for many years and stood in the front ranks of their profession. It would have been perfectly impossible to convince these men of the truth of Homœopathy by any theory, presentation or hypothesis; it could only have been done by their own clinical and personal experience. This they used at first tentatively and grew stronger in their knowledge by repeated trials until finally they felt and knew the great engine which the Homœopathic law had placed in their hands; after which they advanced fearlessly and left records behind which our half-hearted work to-day has been unable to emulate or even in speculative hands merely to verify.

It is no part of medicine to start with the assumption of absurd,

impossible, how could it, and all such expressions. Knowing so little of how medicines actually and intrinsically operate it is impossible that we should prescribe their limits arbitrarily. There is only one method which will stand, or ever has stood, and that is the test of faithful clinical experience. It was this that gave to Hahnemann himself the great law of Homœopathy, and we shall succeed as he and his great followers succeeded just in proportion as we use the methods of these men. All else which poses in the guise of science is merely pseudo science.

THE PASSING OF THE PURE SYMPTOMATOLOGICAL PRESCRIBER.

EDWARD R. SNADER, M. D., PHILADELPHIA.

Those who have attained their majority in the harness of medicine, and even the colts in therapeutics, have been sufficiently alive to passing events to note that the day of prescribing upon a purely symptomatic basis is passing away. This is sometimes a matter of wonderment to the tyro, who has been stuffed so full of the wonderful magic of the method and whose imagination has been fired by the reported astounding attainments following upon the choice of remedies from the purely symptomatic standpoint, that it takes him a little while to disgorge his ex-parte created enthusiasm and view dispassionately the evident iconoclasm of method among many of our school. To the older and perhaps more observant and experienced practitioners the fact of the iconoclasm is no less patent, but they are able to ascribe a host of reasons why this radical change in manner and method should occur and is occurring.

In the first place, and it might as well be stated frankly at the outset, the older heads have had more opportunities than the younger ones of seeing the method hopelessly fail at a crucial point in the sick room, and they have grown overweary of having charged up to them, and of charging themselves, with gross incompetency in the application of the method. Surely, they reason, they cannot always and eternally be in error; they are not always stupid. And even splendid results, occasionally achieved, are not so often repeated as to counterbalance the frequently noted failures. Is the

law wrong? Are they wrong? is the query these men put to themselves. Staunch and loyal to the law because propounded by a master mind, because its application in years gone by had wrought such mighty changes in the world of medicine; because of the strenuous, almost fanatical, advocacy of the method by those who presumably knew more about it than the ordinary prescriber; because the method itself, in its *apparent simplicity*, appealed to their inner consciousness as plausible, and because they could see thousands of crude and refined examples of the action of the law of similars in all schools of medicine—they chose to consider that the law of similia is not to blame, but that the method of applying it is defective.

Once having doubted, numerous other reasons for the noted departure from the ancient methods come into the mental view. All of us have realized the stupendous progress made in sciences allied to medicine, and in sciences outside of it, not to see that conservatism in medicine is death. Only the narrowest possible conception of our science can for a second entertain the idea that we are now enjoying the millennium of medicine, the finality of all possible perfection. Such an idea is abhorrent to an observing, thinking, feeling, acting, living doctor. No, the world of medicine feels the mighty impetus of progress as does everything else in science, art, mechanics, and the varied industries. Did we not feel this terrific force we would be dead, even if not buried. Progress, astounding progress, has been made in medicine, but at that, its great achievements in the last two decades are paltry besides those made in other walks of so-called sciences. That progress, however, has changed the front of medicine, in several aspects at least, many times within the last twenty years. The older men in medicine know that kaleidoscopic changes take place before a final settlement of a reputed progress in medicine finds its apparently correct position, and this position is again shifted with each new discovery. What is true to-day may be false to-morrow. New light, new side lights, are flashing ever and anon, changing the entire viewpoint of an apparently settled and fixed truth in medicine. The whole field of medicine and therapeutics has widened. Diagnosis is more accurate; therapeutic measures of all kinds more intelligently applied. Light here and there is glinting through the Dark Ages of Medicine. Surgery, bacteriology, pathology, hygiene, preventive medicine, prophylaxis all have materially modified the viewpoint held by

therapeutists a few years ago. Do you think for a moment that during all this progress the Homœopath has been in a state of intellectual catalepsy as regards advances in drug therapeutics? Has not this increased knowledge narrowed the field of applicability of his law? Does he not know that some diseases are now surgical for which he formerly blindly prescribed the medicine symptomatically indicated? Does he not see that many of the cases he once gave medicine for do not need it at all? Does he not apprehend that his greater knowledge of what may be termed the natural clinical course of disease makes him doubt many of his former supposed therapeutic triumphs? Does he not realize the absolute impossibility of any sane human being mastering the enormous mass of Materia Medica material with which he is supposed to be as familiar as his A, B, C if he would be a master mechanic with his drug tools? Does he not sense the fact that the so-called masters left him the monumental and impossible task of *proving* or *disproving* the truth or falsity (for therapeutic purposes) of this overwhelming concatenation of sense, nonsense, vagaries and idosyncrasies found in the merely schematic Materia Medica? Does he not soon ascertain indubitable evidence of unwarranted interpolation of symptoms in what should be a sacred "pure" drug proving? Yes, if he is alive he fully realizes this, and a good deal more.

Finding the field of application of the symptomatic prescribing limited by the advances of modern medicine; finding his Materia Medica unmasterable during a natural life time; finding failure after failure with drugs apparently indicated he naturally drifts into what our purists would call a "slip-shod" way of prescribing drugs. When he comes in contact with an ordinary every-day case in which the prognosis is favorable, he does not stretch his memory centres for a differential diagnosis between fifteen or twenty remedies suggested by the case, but he immediately gives a drug that either in his own or other hands has most frequently proved effective in that particular affection. In other words, he does not take off his coat, roll up his sleeves, and expectorate on his hands to do a job of therapeutic work that requires only a skillful turn of the wrist to accomplish, and feels satisfied with results, inasmuch as those results were almost sure to occur anyway, and it wouldn't make much difference to the patient anyway, for he would get well whether the medicine worked or not. This tendency to routinism is inherent in medical men, and before it can be eradicated it must be

indisputably demonstrated that there is a better and quicker way to prescribe drugs.

The doctor is thus brought face to face with the fact that the application of the so-called symptomatic method of prescribing for the sick is exceedingly difficult of accomplishment, and he immediately wonders if there is not a cog loose in the wheel somewhere. He cannot blame the law, so he blames the method; and he has a perfect right to blame it, for as a practical physician he has ascertained that the method is not *reasonably* successful; that it is cumbersome of application; that the basis from which he makes the application is uncertain, so uncertain as to be insecure; that he never makes an ideal prescription, that is, never gets a true totality of symptoms; that when he approximates an ideal prescription it fails him more often than it succeeds. Still unable to doubt the truth of the law of similia, he finds refuge in assaulting its methods, and comes to the conclusion that symptomatic prescribing represents only one phase of a universal law. Symptoms present the subjective, the psychological side, but rarely the pathological or pathologi-physiologic side, if I may so put it. He sees that only a part of a drug picture is presented. He now no longer ignores diagnosis in his prescription. If he prescribes for a case of typhoid, he endeavors to cover not only the subjective symptoms, but the ulceration in Peyer's patches and the altered blood state. Who shall say he is not as good a Homœopath as before he attempted to combine symptoms and states with pathological alterations in function. In my opinion he is a better Homœopath than the man who cannot or will not see that symptomatic prescribing is only one phase of the application of the law of similia. Again, in my opinion, he is the only real Homœopath, the only real follower of Hahnemann, for he is trying to develop the application of the law and employs the method of that application. This modern Homœopath has felt the impetus of progress, he is more than a pill peddler, he has realized the deficiencies in his law's applicability, and is endeavoring to construct a new Materia Medica, based on sound, sensible and tenable grounds. He is doing this work under difficulties, because the works are few in which he can find a *full* picture of the drug. He studies poisoning, for the *tissue* effects of drugs; he studies symptomatology for the intangible yet valuable subjective effects. He combines these methods. He finds new successes. His love of the law is enhanced. He is simply praying that his brethren will see

the new light. He hopes ardently for the time when the Homœopathic profession will recognize the fact that the law of similia is supreme as a method of drug prescribing, but that the manner of applying that law has been defective. He quarrels not with the law, but alone with the manner of its execution. Is he to be condemned for this? Is he to be accused of being a traitor to the cause? No! He is the true lover of the law. He seeks its enchantment. He realizes that as surely as the sun appears to rise and set, the Homœopathic school is doomed to annihilation, if it does not do its duty and develop to its fullest extent the law. Progress is progress. We must acknowledge after all these years of practical experience in attempting to practice the symptomatic medicine, that there is more in the law of similia than is expressed in the phrase, the "totality of the symptoms." When it is universally seen in medicine that the law of similia *is not a law of cure but a law or drug selection*, and that there are many ways of making that selection, of which the symptomatic method is only one the work of the school of medicine known as the Homœopathic will be justified, and not till then. Let us be up and doing. Let us prove that we can demonstrate this truth. If necessary, let us stand for the truth of the law of similia, even if we have to smash to flinders the methods of the master. If Hahnemann were here he would applaud the endeavors of his followers to extend the usefulness of the law of similia. At any rate, it is the *law*, not the man, to which we owe allegiance, if we believe in the truth of this law.

PRACTICAL USE OF AILANTHUS.

M. A. WESNER M. D., JOHNSTOWN.

Ailanthus is a tincture propared from the fresh young shoots, leaves and flowers of Ailanthus Glandulosa of the natural order Simarubaceæ. This tree is of medium size, commonly cultivated in the United States, and is known as "Chinese Sumach," sometimes called "The Tree of Heaven," while the Germans term it Gotterbaum. The character of its foliage appears like a gigantic sumach, and was at one time considered to be a Rhus. In France it is cultivated for the sake of its leaves, upon which the Chinese

silkworm is fed, and is known by the name of "Japan Varnish" (vernis du Japan), from its having been mistaken for the true Japan varnish tree, which is a species of sumach.

Our friends of the dominant school make use of the pulverized bark in doses varying from seven to thirty grains. When chewed, beside the bitterness, it appears, through its influence on the gustatory nerves, to produce in a few moments a general uneasiness, a sense of increased weakness, dazzling, cold sweats with shivering and nauseous sensations. The inference drawn from these effects is that it is a powerful depressing agency on the nervous system similar to that of tobacco. It has been given in several cases of tapeworm in the human subject, and has proved remarkably successful in causing the expulsion of the animal, and at the same time producing loose evacuations from the bowels. I would not, however, advise you to give it a trial for that purpose, as it is too dangerous a drug to be used indiscriminately, since instead of a dead tapeworm you might possibly have a lifeless patient.

The Homœopathic proving of this drug is exceedingly meagre. The older authors of Materia Medica did not so much as consider it worthy of mention. Nevertheless, whatever knowledge we have of its action proves it to be one of our most invaluable remedies. I shall not, however, give you the full proving, as the time allotted to me is too short for so elaborate a discussion of this all-important subject.

We have for its general symptoms nausea, vomiting, diarrhœa and sometimes dysentery, a low type of fever with constant muttering delirium and intense restlessness. A rash resembling scarlatina, general malaise and great prostration. Dulness over whole body with heavy, faint feeling. Skin is jaundiced with erysipelatous swelling, and there is a livid eruption on the whole surface, especially on forehead and face, with dingy patches between the spots of eruption, and small, rapid pulse, dry surface, the livid color of the skin when pressed out returning very slowly, the whole being a complete picture of torpor. The entire proving continues in this manner, and presents to us a beautiful picture extremely interesting, remarkable for the depth of its energy and the vigor and force of its action. I would study it as well as all other important remedies in the Materia Medica, as they are essentially necessary to our success as physicians.

Remember, my friends, that Materia Medica is our principal

mainstay, the foundation upon which must rest the grand structure of Homœopathy. Without its guiding direction and its accurate assistance we are lost, irretrievably swamped in the mysterious labyrinth of obscure and obscurable therapeutics. It was for this cause the great and good Hahnemann first rebelled against the rules and customs of his time, and for this same reason we now exist as independent and self-reliant physicians, and meet here today. To excel in this branch requires careful study and constant application. In medicine you cannot accomplish anything great, or meet with a full measure of success, or rise far above the dark and murky valley of discordant mediocrity without continued research and eternal vigilance. The injunction: "In the sweat of thy face shalt thou eat bread till thou return to the earth, out of which thou wast taken," applies directly here, and is as effective now as when first promulgated thousands of years ago. Again, bear in mind that Homœopathy is equal to any and every emergency where it is within the province of man to save human life or relieve human suffering by the application of medicine. If, then, you should fail to find the indicated remedy do not, I pray you, bend your knees to the obsolete drugs of the dominant school for relief, but rather search until you have found it. I tell you search for it, climb for it, or dig for it until the end is finally accomplished. This is your only course to pursue if you wish to become and remain thorough Homœopaths. And I tell you there is a grim satisfaction, beautiful and sublime in these noble and heroic efforts, when success crowns our most earnest endeavor, which spurs us onward to greater deeds of valor and larger fields of usefulnes. And with a proper knowledge of this subject we can well afford to lay aside the hypodermic syringe, consign the ancient and murderous fad of vaccination to eternal limbo, fling antitoxin with the whole boasted system of serum therapy to the four winds, not of heaven, but of everlasting perdition, and cast away those mongrel combinations which sorely afflict many of our fellow practitioners.

But I have wandered away from the subject, and I hope you will pardon this digression, for I feel just as these expressions indicate. I wish to emphasize the fact that we must not lose sight of the old landmarks of true similia.

But when and how shall we use this remedy? It is employed in constant frontal headache of a neuralgic character, and in paroxysmal headache with drowsiness during the day, confused mind and

mental depression. In headache with confused mind and mental depression Ailanthus is pre-eminently the remedy. And then it is especially useful in the low zymotic forms of sickness, as we find in diphtheria and scarlet fever, in blood poisoning and symptomatic typhoids.

In one form of malignant scarlatina we have these symptoms: Violent vomiting, tongue and also the teeth dry and covered with a black crust; thin watery diarrhœa forcibly expelled like the roaring of a torrent, with meteorism and rumbling in the abdomen; stools sometimes dysenteric; severe headache; intolerance of light; inability to sit up and intense prostration; small, rapid pulse; chilliness with little or no fever in the beginning; drowsiness and at the same time extreme restlessness; great anxiety. In six hours after the first invasion the drowsiness increases to insensibility and coma, with constant muttering delirium; patient does not recognize the members of his family. By this time there is an elevation of temperature, which often rises to 105 degrees or 106 degrees. Then we have a fine miliary rash beneath the surface, at times so small that it almost escapes observation. Between the points of rash the skin is of a dark purple hue, indicating extreme congestion here as well as in every part of the body. Rash will show itself bright red on chest and face for a few hours, then disappear and give place to its former purple color. The discoloration of the skin when pressed by your finger returns very slowly. Temperature remains high, and the patient continues very restless with complete coma, and in the course of twenty-four to thirty-six hours after the first invasion he is seized with a violent convulsion, which persists until death closes the scene forever. These are the symptoms in such cases as nearly as I can state them from observation.

Now, most of the symptoms, in fact, all the important ones enumerated above we find in Ailanthus. We have nausea, vomiting, diarrhœa or dysentery with meteorism and rumbling of the abdomen. We have headache, intolerance of light, great prostration, small, rapid pulse, chilliness with little or no fever, as we find during the first few hours in scarlatina, or a low type of fever with restlessness and delirium. Then we find general discomfort with confusion of ideas, stupor and indifference. A fine miliary rash also makes its appearance over the entire surface. In Ailanthus this rash is most prominent on the face, while in scarlatina it comes first on the chest and spreads to other parts that are covered, but

the general aspect of both is identical. We have beside the livid color of the surface in both as well as the complete condition of torpor. It is also useful in diphtheritic scarlatina with ichorous discharge from the nose, throat dusky red, with grayish exudation, great swelling, both internal and external, and in any case where the eruption is slow in appearing.

Taking these facts into consideration, my friends, we are forced to conclude that this drug in its highest dilutions is the proper remedy for malignant scarlatina, which has the characteristics described above. It has been used with gratifying success. Give it a fair and impartial trial, but do not prescribe it any lower than the 30th cent.; and when once perfectly understood, it is to be hoped that there will be fewer fatalities of this dread disease in its earlier stages than we have at the present day.

REPORT OF THE

SECTION OF OPTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

Ophthalmia Neonatorum, by G. H. Haas, M. D.
Eye, Ear, Nose and Throat Experiences, by H. K. Hoy, M. D.
Chronic Suppurative Otitis Media, by G. J. Palen, M. D.
Penetrating Wounds of the Eye, by W. W. Speakman, M. D.
Ocular Defects; Their Relation to Mental Backwardness in Children, by G. W. Stewart, M. D.
A Plea for More Careful Differentiation of Nasal Diseases; With Illustrative Cases, by J. W. Stitzel, M. D.
Drainage in Acute Otitis Media, by C. M. Thomas, M. D.

OPHTHALMIA NEONATORUM.

GEO. H. HAAS, M. D., ALLENTOWN.

The subject continues to be of interest and importance because many practitioners never see the unhappy results from neglected cases of purulent ophthalmia of the new-born. Blindness, with but one exception—the loss of the mind—is, in my estimation, the most deplorable condition that can befall a human being.

All authorities are now agreed that ophthalmia neonatorum is due to but one cause, viz., infection, and that this infection, as a rule, takes place during parturition, and the disease manifesting itself on the second or third, very rarely on the fourth or fifth, day after birth. In those cases where the disease manifests itself later than the fourth or fifth day, it cannot be referred to the act of parturition, but is due to negligence in bathing, the use of soiled linen, sponges, contact with the lochial discharges, or infection from some other patient. The gonococcus, of Neisser is held responsible for all severe cases, being especially numerous during the muco-purulent stage. Cases presenting the specific microbes are especially severe, and the cornea is apt to become involved, while the reverse is true of the non-specific.

Inoculation with healthy lochia will never produce the disease. The parts first affected are the palpebral conjunctiva, producing a discharge, which is, at first, slightly turbid mucus, collects in the inner canthus, and the palpebral vessels are slightly injected. The disease, however, progresses rapidly, and in one or two days the palpebral conjunctiva becomes swollen, red and velvety, and secretes pus freely. The bulbar conjunctiva now shows an increased injection, and on everting the lid flakes of pus are found, and the conjunctiva becomes darker and bleeds readily.

The lids become puffy, sometimes to an extreme degree, and the upper one over-riding the lower. The ocular conjunctiva becomes injected and chemosed. It may overlap the cornea so that the latter appears as if at the bottom of a pit, and much smaller than it really is. The lids are tense with marked blepharospasm, but when separated thick yellow or greenish pus wells forth from the palpebral fissure. This is the stage of greatest danger to the cornea. It may begin to break down from direct infection of its surface by the discharges, or its nutrition may be interfered with by the chemosis making pressure on the long and anterior ciliary arteries. After a gradual subsidence of all the symptoms, which may be expected from four to six weeks, the conjunctiva will remain thickened and of a granular appearance for some time.

The greatest danger of the disease is to involve the cornea in an ulcerative process, which is in direct ratio with the chemosis and the virulency of the discharges. When its vitality becomes impaired its lustrous surface becomes dull and hazy. Should this occur in the first few days of the disease the danger is materially increased. Ulcers of the cornea may occur in any location and may involve only the superficial layers or go on to perforation, which not only allows the escape of aqueous humor but likewise opens a gateway for the microbes to enter the anterior chamber, which may result in an invasion of the uveal tract causing a panophthalmitis with a rapid destruction of the eyeball.

Statistics show that the disease is an easily preventable one, and one that is readily cured in the majority of cases if recognized in time. Primarily the function of the physician was to cure disease, but of late years there has devolved upon him the additional duty of preventing disease. Much has been written about legislative enactments to control the occurrence and proper care of these cases; even our own State has passed an act imposing a duty upon all

midwives, nurses or other persons having the care of infants, and also upon the health officer, and fixing a penalty for neglect thereof, and while many views have been held as to the most effectual and least harmful way to prevent ophthalmia neonatorum, to Biscoff, of Basel, belongs the credit of first introducing a systematic method of treatment for the prevention of this disease. He washed out the vagina before the delivery with a solution of carbolic acid and instilled into the eyes of the baby a few drops of a solution of salicylic acid. The use, however, of antepartum intravaginal antiseptic injections of all kinds has now become deservedly unpopular, for the reason that they make the mucous membrane dry and thereby retard the delivery, which is enough to condemn their use, for the longer the child's head remains exposed to the vaginal secretions the greater the danger of the eyes to become infected. Moreover, it has been found that vaginal douches, such as are commonly employed in obstetrical practice, are rarely, if ever, effective in destroying all the intravaginal bacteria.

Crede, of Leipsic, some twenty odd years ago, adopted a routine method of treatment which consisted of instilling into the baby's eyes one or two drops of a two per cent. solution of nitrate of silver, by which method he was able to reduce the number of cases of ophthalmia neonatorum from ten per cent. to less than one-half of one per cent. In all the large maternity hospitals of Europe and America where this method has become the rule, the same success has been attained, and the value of the method has received such universal acceptance until the prophylaxis of ophthalmia of the new-born is slowly becoming a practice so generally used, and the laity is being made acquainted with its value to such an extent, that the doctors who do not employ it are in consant danger of malpractice proceedings against them.

In view of the effect of the prophylactic treatment of the disease, to have a case of ophthalmia neonatorum not only suggests a want of care on the part of the attendant but also endangers his reputation should the disease result in visual impairment or blindness. I would at least advise the prophylactic treatment in such cases where it is known, or where there is good reason to suspect infectious discharges from the vagina of the mother. We should make it a rule in obstetrical practice when giving the routine instructions to the nurse as to the management of the mother and child after labor to state to her the danger of sore eyes in the new-born.

and the importance of early treatment. By this repeatedly cautioning and instructing the laity, fewer eyes would be lost through ignorance and neglect, and greater care and watchfulness would be observed than could be enforced even by medical legislation.

The disease being essentially a local affection, local applications, therefore, constitute an important part of the treatment. This requires almost as much care and discrimination in its application as the selection of the constitutional remedy. Throughout the disease the most perfect cleanliness must be observed. During the first stage, or until the free flow of pus begins, frequent irrigation of the conjunctival sac, both day and night, with a tepid solution of boric acid, ten or fifteen grs. to the oz. The application of vaseline to the edges of the lids after each cleansing to favor the escape of the discharges, and the constant application of ice cold cloths to the lids will accomplish all that can be expected during this stage.

When the discharge becomes more profuse and purulent in character a more energetic treatment should be employed. The cleansing with the boric acid solution should be continued, but in addition an application of nitrate of silver solution from five to twenty grs. to the oz., should be made to the everted lids. The excess of the silver solution must immediately be washed off with a salt solution of a strength of 40 to 50 grs. to the pint, until no precipitate forms any more, before the lid is returned. The greater the redness and swelling and the more profuse the discharge, the more frequently should these applications be made. During the greatest intensity it may be made twice a day, but always by the physician himself, and as soon as there is a subsidence of the swelling and discharges the stronger solutions of the silver should give way to weaker ones, and the applications should be made at longer intervals. I have often seen eyes kept sore for weeks by the promiscuous use of solution of nitrate of silver, or its newer preparations, Protargol and Argyrol, which on withdrawal of the same and the substituting of some milder lotion caused marked improvements to be noticeable at once. Should the cornea become hazy a solution of sulphate of atropia, of four grs. to oz. should be used often enough to keep the pupil well dilated, and hot applications should take the place of the cold, if the latter has been employed, on account of their devitalizing effect on the cornea. If a central corneal ulcer appears the atropia should be continued. If, however,

a marginal ulcer occurs and perforation seems imminent, a solution of eserine should be substituted of 1 to 200. Eserine will allow less of a prolapse of the iris should a perforation occur. Under no circumstance should a prolapsed iris be snipped off, for an intact iris affords considerable resistance to the entrance of the microbes, while a cut one invites it.

After the swelling and purulent discharges have pretty well subsided we need a bland solution. One that has given me excellent results is one of ten grs. boric acid, glyco-thymoline, one dr. to the ounce of water, dropped into the eye every three or four hours.

All persons coming in contact with the patient should be cautioned on account of the infectious nature of the disease, and all cotton, bandages and pads used about the eye should be burned.

The general condition of the patient should not be lost sight of, for that has much to do with the success or failure of the local treatment. Badly nourished children give us much anxiety. The general condition should be inquired into, and any departure from the normal should receive careful attention. Thin and badly nourished children will derive much benefit by the inunction of olive oil twice a day. If the food disagrees proper dietetic regulations must be instituted. The well selected Homœopathic remedy will assist in hastening the cure, and will generally be found among the following list:

Acon., Apis, Arg. nit., Calc. carb., Calc. hypo., Hepar, Mercurius, Puls., Rhus tox., Calc. and Ars. jod.

The indications for these remedies are well laid down in our Materia Medicas and text-books on ophthalmology. The prime factors in preventing serious complications in ophthalmia neonatorum are the early recognition, energetic treatment, and the unremitting cleanliness.

EYE, EAR, NOSE AND THROAT EXPERIENCES.

H. K. HOY, M. D., ALTOONA.

The first case I will present is one calling attention to the fact that nose and throat affections sometimes reflect themselves in the form of eye symptoms, and this calls for greater care upon our part in diagnosis. A young lady was sent to me for refraction. She complained of severe pains in the head especially when going to school, which medical treatment failed to relieve. Manifestly she accepted in the right eye + 42 and in the left + 48. With these lenses applied she had relief from pains and got along satisfactorily for about two years, when she returned to me for a change of lenses, saying "the pains are again annoying me." A few corrections were made, but test cards answers were contradictory, and a test was made under atropine, which gave a result of + 48 = + 72 ax 90° for each eye. These lenses were applied, and for a short time there was an improvement but it did not hold out. The nose and throat were then looked after. Enlarged tonsils were removed and the posterior nares thoroughly curetted and all possible hypertrophied tissue removed and nasal dilation resorted to; six months have now elapsed and the result is that the lenses last applied can be worn with perfect comfort, but the patient contends that she can subject her eyes to close work without glasses with entire immunity from pain.

The next case is one of a young man of a highly organized sympathetic system that caused me great surprise. He came to me for relief of deafness. He had the telephone ear, at any rate his business required him to use his ear many times each day at the phone. Upon examination I found impacted cerumen in the ear and I removed the same easily by the application of a small hooked probe. In a moment my attention was called to him, and if I had not caught him he would have fallen off the chair, and it was probably twenty minutes before he was fully restored.

The next case is on a similar line but with the difference that irritation of the nose, and not the ear, caused the fainting. A gentleman came to me for deafness in both ears. I found impacted cerumen in large amount in each year, and after an hour or more of syringing and patient work this was removed. He then asked me

to examine his nose and throat. This I did and found very large turbinal hypertrophies, and applying a flat probe to one of these he fell like a log to the floor before I could catch him, and it was fully a half hour before he recovered sufficiently to walk, during which time he sweat most profusely.

The next case is one of a lady twenty-five years of age whose husband consulted me in regard to her snoring. He then brought the wife, who was found to have exceedingly large, dark, spongy looking tonsils. These were removed. The hemorrhages were quite profuse, and the healing very slow, but the result was all that was desired, as the husband now sleeps and dreams of the snores only as a memory.

The next case that I will present is one in which nasal dilation was resorted to as a means of overcoming turbinal hypertrophies. The patient was a gentleman about twenty-five years of age, and in many cases in which I have resorted to nasal dilation this was the only one in which there was serious hæmorrhage. In this case the blood rushed from mouth and both nostrils so profusely that the assisting physician and myself both feared death, before means to stop the hæmorrhage could be applied. Plugs of absorbent cotton steeped in a solution of geranium maculatum were applied through the nostrils, however, and stopped the bleeding almost instantly.

The next and last case that I will present is that of a little girl about nine years old, who, while she has ordinarily good health, does not have the appearance of being very robust. She has passed through the general run of childhood diseases. Diphtheria left her with enlarged tonsils and uvula, and a weakened condition of the throat. Recurrent colds aggravated the throat condition so that frequent medical attention was necessary. These attacks were followed by a cough that was very hard to control. It was finally decided to remove a portion of the uvula and tonsils, which was done about a year ago, since which time there has been no throat trouble, no cough, and the patient's condition seems improved in every respect.

DISCUSSION.

Dr. J. W. Stitzel: I am very glad Dr. Hoy has given us the kind of paper he has; for after all we come here to profit by one another's experiences, and we can do it in no better way than listening to the experiences of others.

His first case illustrates very nicely the possibility of eye symptoms arising reflexly from some disturbance within the nose.

While I have read in our medical literature from time to time of cases of errors of refraction or at least marked eye symptoms that disappeared after the removal of some irritating agent within the nose, yet I have not as yet seen a case where the eye symptoms could be directly traced to some nasal reflex.

But I have seen several cases where the loss of vision or the pain in the eyes and head, etc., could be directly traced to a suppurative nasal sinusitis, and were not relieved by correcting the error of refraction, but were promptly relieved by treating the diseased sinus, one of which I mentioned in my paper.

But we should bear in mind in every obstinate case of refraction that we may have nasal reflexes.

You will find nasal headaches are worse in the morning, and if your eye symptoms are also worse in the morning look out for trouble in the nasal cavity.

I have seen several cases of marked vertigo following the removal of cerumen.

Any sudden pressure that forces the Stapes into the Oval window is apt to so change the pressure of the Labyrinthine fluid as to produce a disturbance of equilibrium or even faintness itself.

I well remember one case which I saw, which had been taking medicine for about a year for a marked nausea followed by vertigo, that his attending physician ascribed to some stomach trouble, that was promptly relieved by the removal of a large mass of cerumen from one ear.

I also have in mind a man from whose ears I frequently remove small quantities of scales and cerumen, and, although it is only a question of a few minutes, yet until I get through with him he has all the symptoms of an acute rhinitis with a marked cough.

He sneezes and coughs continually and his eyes and nose both discharge profusely.

More than one case of persistent cough has been relieved by the removal of cerumen from the external auditory canal.

I have also seen several cases of profuse vomiting following the removal of cerumen.

The Doctor speaks of nasal dilatation. I have never seen any literature on this subject, therefore am under the impression that it is an original method with him of overcoming hypertrophied tur-

binated bodies and would like to have the Doctor explain the methods used for the benefit of the Society.

Dr. Julia C. Loos: In cases where there is a large collection of hardened cerumen very often pressure in trying to remove it seems to do more harm than good. A very easy method, without any harm whatever, is the introduction of a few drops of chloroform in the ear, which works in a very cleanly and interesting way. It loosens the whole lump by dissolving that wax immediately next the skin, and the whole lump will come out when it is impossible to make any impression on the surface of the lump by scraping, or anything of that kind, and you are afraid to make any pressure. I have in more than one instance removed lumps as large as the tip of my finger, filling the whole internal end of the meatus, by the instillation of a little chloroform which loosened it very easily.

Dr. F. W. Boyer: It might be just as well to say here, in the matter of personal experience in the removal of foreign bodies from the ear, that when there is time, and ordinarily there is, direct your patient who has the accumulation to apply a wad of cotton wet with water at intervals of an hour or so for six hours before coming to your office. An instrument then is never necessary to touch either the wax or the ear, other than the nozzle of a syringe. I ordinarily use the alpha syringe, which produces a continuous spray, and the material which follows its use and which is brought out, is as cleanly as anything can be, without any irritation to the ear, and comes out very quickly. The substances which come out are sometimes very surprising. About four months ago I had occasion to see a young woman who came to the office with hardness of hearing. She said one ear had been hard of hearing for nine years, and the other one had become so recently. In looking in the ears they both seemed to be filled with hardened wax, and in using the syringe one ear yielded a plug of wax about the size of an ordinary lima bean, and the other one a bug about three-quarters of an inch long which had flown into her ear nine years before. Water, if applied, will do just what chloroform will do. An instrument should never be introduced in the ear, unless it might be forceps to catch hold of a wad of cotton or grain of corn, but a spoon never according to my experience.

Dr. W. G. Dietz: Speaking of chloroform, I had one experience I shall not forget. I did on one occasion use chlorofrm in the ear to relieve a patient. My patient danced around for about fifteen

minutes, and I thought she would go crazy. If there is not decided protection of the tympanum from sufficient wax, if there should be an exposed part or a perforation, the irritating effect of chloroform would be most distressing. I think hydrogen dioxid one-half strength will do the work very quickly and without trouble.

Dr. W. W. Speakman: There is one point not directly referable to this paper, in the removal of foreign bodies, such as beads or grains of corn, from a child's ear. That is the futility of attempting this removal unless you are thoroughly prepared. It is quite impossible to satisfactorily remove foreign particles from a little child's ear without the administration of an anæsthetic. I have had some few bad cases. One of the worst is a small round glass bead, such as children are apt to have strung around their necks. In one case efforts had been made repeatedly by three or four men for two or three days until the meatus was so swollen that nothing could be done. It was very difficult to do anything more. These efforts had been made without chloroform, the child struggling, with resulting injury to the sides of the canal and danger to the drumhead, so the probability is that there would not have been that same amount of swelling and injury had the glass bead been left entirely alone. I removed it by having a little bent steel probe, which I was fortunate enough to get in the hole in the bead. The bead was so tightly impacted and the skin so swollen it was impossible to get anything around it. There was not room enough between the side of the canal and the bead to get in a scoop. If it had been a perfectly round bead without a hole in it I hardly know how we would have removed it. Such patients should be chloroformed, and the doctor prepared to go ahead intelligently, and not blindly, with the proper instruments with a struggling child, because you can only do more damage than good.

Dr. C. M. Thomas: I wish to confirm Dr. Dietz's experience with reference to the use of chloroform in these cases and that of peroxide of hydrogen. Unless the surface of the membrane is protected suffering will be extreme from the use of chloroform. If, however, it be protected the use of chloroform I think will very materially assist us in separating the plug from the canal, but it seems to me peroxide of hydrogen injected along the line of the plug of wax is all sufficient. The removal is best accomplished, I believe, almost invariably with the ordinary syringe, provided the nozzle of the syringe has a small lumen. I should not have said an ordinary

syringe, because I believe the nozzle of most of them have too large a lumen and the stream is so large it is very apt to simply push the foreign body, or the accumulation, still further into the canal. It must be a small stream which can insinuate itself between the wall of the canal and foreign substance. I was particularly interested in Dr. Hoy's reference to the matter of dilatation of the nostril. I had had no experience myself. I trust he will be able to let us hear further as to his results, whether they be permanent or not, and as to how long the method has been in use.

Dr. H. K. Hoy: I have been using this method for probably five years. Some of the persons I treated are so well satisfied that they have not had occasion to come back for treatment. If you have adenoids or hypertrophies of any kind to close up the nasal cavity, this is a quick way of getting rid of them. The turbinate bones are spongy, and it does not require very hard pressure to feel them giving away, and you hear a cracking sound if you are successful, and do it in such a way that the bone remains pressed in, it leaves more or less of a permanent opening. Where there is a good deal of soft hypertrophy over it, it bruises that, and in healing that will go down. Some of those I have treated have come back subsequently for treatment for nasal trouble, because just these things occur in the first place. They are likely to recur to a certain extent, but if you make a successful dilatation the bone remains back, and it is not so likely to recur, and the larger the opening the less trouble there is in the nose. The more nearly the nasal cavity gets closed up the more trouble there will be. The surfaces are naturally in close opposition, and the more accumulation there is on them from hardening in any way when there is trouble there, the faster the accumulation occurs, the quicker the opening would be made smaller. The thing is simply a quick way to remedy a closure. You can do in a minute what it would require perhaps six months or a year to do by medicine, and probably when you do get through with it it is done rather by hypnotic influence than it is by the drug, so that I find it a satisfactory thing, and I believe that it would be a good thing for all of us if we would look into that matter more closely. I would advise every physician who undertook to do this to put his patient under an anæsthetic. I have performed dilatation on some people who would not take an anæsthetic, and said they could stand a little pain. In a few cases they said there was no pain. Others complained of a great deal of pain, but I always advise an anæs-

thetic. With the exception of one case I cite here, there has been no undue amount of hæmorrhage, and sometimes very little. Sometimes you do some damage that causes more or less hæmorrhage, but only one case was at all alarming. In that case we had a bottle of adrenalin chloride at hand. I made two plugs of absorbent cotton, and just as quickly as I got that pushed back so it covered the place, it seemed to stop that very alarming hæmorrhage. I had an ordinary-sized porcelain bowl, and while I was preparing the cotton about that depth of blood (indicating) accumulated in that, so I think if we had not acted very promptly we would have lost that patient. Outside of that there never has been an alarming hæmorrhage.

Dr. C. M. Thomas: If you had closure influenced by marked deflexion of the septum, would that be applicable?

Dr. H. K. Hoy: If the septum is deflected so the closure is from that, I do not know that this procedure would do much good. It might do some good, because where you get this accomplished you have an opening. If you have a good opening the patient would naturally get better without any further treatment. About curetting—sometimes I get my finger behind the soft palate, and can feel adenoids, etc. You can remove them with a strong fingernail. I generally use the curette and curette out everything I can get out. In cases where I have done that the results have been most satisfactory.

Dr. C. M. Thomas: I would like the doctor to tell us whether he has demonstrated fracture of the scroll bones. I suppose it must occur as the dilating influence is on the lower turbinate. It cannot be on the upper or middle. Has fracture of the bone been demonstrated, and how immediate is the effect as to increasing the capacity?

Dr. H. K. Hoy: The result may not be immediate, because in doing this the soft parts are wounded, so that probably when it comes to bleeding there would be no very appreciable showing until after healing takes place. First there is a seeping of blood, and the opening you do make will be more or less closed by blood, and where there is seeping of blood you have for a few days to keep the plugs in place to stop that. Then you take those out, and after healing takes place you have your showing as to the greater ease in breathing. It is not immediate.

Dr. H. F. Schantz: I would like to ask the doctor one question. After using his method of dilating the nostril, and probably having

a fracture and these adhesions forming, has he had any difficulty with obstruction of the lachrymal canal?

Dr. H. K. Hoy: I have not in a single case.

Dr. H. S. Weaver: I have used some nasal dilatation but not to the same extent the doctor speaks of. I have used it considerably, quite often doing it under a gradual process. I have used the Sinnexon dilator, cocainized the turbinated bones, made a rather firm pressure against the turbinated bones, and had them follow that up by the home method practice. Mr. Lentz makes for me some hard rubber dilating plugs, a special plug I had him make in the shape of a wedge, very thin at the point and gradually tapering. I have them to introduce them once or twice daily at home, in that way gradually increasing the calibre of the nostril, and in some cases it has given me most gratifying results. I have only in one case caused fracture of one of the turbinated bones, and that I did with a Sinnexon dilator. I had quite a severe hæmorrhage, but it stopped in a few minutes. That was done under an anæsthetic. Most of my experience has been simply by the use of cocain in the office.

Dr. C. M. Thomas: I cannot understand how the result can be obtained in these cases unless a fracture has taken place. I cannot understand how anything would be accomplished excepting to increase the swelling of the mucous membrane from repeated traumatism unless the scroll bone is fractured and pushed to one side.

Dr. H. K. Hoy: There is fracture, if you call it fracture, because when you use these dilators you can feel it giving under the hand, and sometimes can even hear it. It does not require much force to do it. The bones are generally just a shell, spongy inside. Under the pressure you feel the bones giving, and if you call that fracture, there is fracture in every case in which you apply it.

CHRONIC SUPPURATIVE OTITIS MEDIA AND ITS TREATMENT.

GILBERT J. FALEN, M. D., PHILADELPHIA.

In taking up this subject, I shall pass over any consideration of etiology, for the causes of this condition are so well known to every practitioner. It is the intention of this paper to make a plea for a

more careful examination and treatment of all cases of chronic suppurative otitis media than it is the rule for the profession at large to give: to point out the necessity for a thorough understanding of the technique of examination and to show that a knowledge of the anatomy is essential to a scientific examination and treatment of these cases; to advise against instituting any form of treatment until after careful examination the pathological condition is thoroughly understoond: to advise against any routine treatment of these cases, and lastly, to outline a systematic method of treatment.

With the exception of the chronic catarrhal form, there is no class of ear diseases so often met by the general practitioner as the chronic suppurative otitis media. He sees, however, only now and then, and he may never have seen at all, any of the serious sequelæ, and, also, his efforts at treatment have been followed by no results in many cases. For these reasons he is apt, in the first place, to lay no great stress upon the cure of the condition, thinking it of no greater import than the resulting damage to hearing and the inconvenience it causes the patient; and in the second place, he despairs of a cure because of the non-results of his treatment. The recorded cases of serious complications arising from chronic suppurative otitis media have increased materially in the last few years, due to a more thorough understanding of the anatomical relations of the tympanum and mastoid antrum to brain structures. While the percentage of cases in which serious or fatal complications arise is relatively small, this percentage is, however, sufficient to point out convincingly the necessity for a most careful examination and treatment of all cases. Indeed, no practitioner should be satisfied until a cure is effected, by either internal, local, minor operative or radical operative methods. For, until a cure is effected, his patient is liable to any of the grave complications, which, it has been demonstrated, result from this condition.

It is not uncommon—indeed, it is common—to find among the general practitioners those who have no knowledge of the use of a head-mirror, nor of the instruments used in the ordinary examination and treatment of ear diseases. Many cases are treated to which no ray of light from a head-mirror has ever penetrated, and where an aural speculum has never been inserted; and, in fact, these instruments have probably not been among the instruments of the practitioner. Many who *do* possess the instruments and

have some knowledge of their uses, have *no* knowledge of the anatomy of the ear, and are, therefore, in no position to undertake the treatment of such cases. Too many cases are recorded of dire results from the use of the aural curette, the cotton carrier and polypus snare in the hands of unskilled physicians. How many practitioners have any idea of the length of the external auditory canal, the position of the membrana tympani, the number of ossicles, or what the appearance of a normal drum is? Indeed, how many have ever seen a normal drum? If the surgeon who believes a carotid artery to lie six inches beneath his knife should cut accordingly, what would be the result? Or, if he should mistake the spermatic cord for the vessels, and should ligate the former, instead of the latter, would the results be pleasing to his patients? These similes may be exaggerated, and yet the external canal walls are often incised for the membrana tympani, or vice versa, and permanent damage is done to hearing, and even death has resulted because the physician knew nothing of operative technique or of the anatomy of the ear.

If, however, a lack of knowledge of the anatomy and uses of the instruments is eliminated, and the practitioner can examine understandingly, he must then decide upon the treatment to be given according to the condition present; for a variety of conditions exist in cases of chronic suppurative otitis media. We have one name, but various conditions, and each condition will demand its own treatment, and no one form of treatment will reach every case. On the contrary, a treatment beneficial in the one case may be detrimental, or even fatal, in the other. Powder insufflation may cure where the membrane is gone, and we have a free surface and no complicating conditions to treat; it may, however, by crusting, close up a small perforation and cause a damming of secretions within the tympanic cavity, which may give rise to extension of the suppurative process to the antrum and further complications. Nitrate of silver solution may be used with good results where the Eustachian tube is free, but it may cause bad effects if there is already a tendency to closure or stricture of this canal. Avoid, then, routine treatment. An ear syringe and a solution of peroxide of hydrogen may suit the one case, it will prove damaging to many others, and often fatal results are reported.

The diagnosing of a chronic otorrhœa is not difficult, an aural discharge, a perforation of the membrane, dull hearing. The diag-

nosis of the objective conditions present is more difficult, and is the result of experience; the diagnosis of existing complications is ofttimes the most difficult of all, and arrived at only after a most careful subjective and objective examination.

These cases are not examined *subjectively* to a sufficient degree. They are not questioned closely, and many vital symptoms are overlooked. Many symptoms, such as headaches, vertigo and other nervous phenomena and symptoms of general debility, etc., are not given you unasked by the patient, because he has grown accustomed to them and does not think to complain of them, and yet, they may point to serious complications. Such symptoms may, and have, disappeared under treatment of an existing otorrhœa.

There are objective signs of importance pointing to serious complications and to the necessity for radical operative treatment; a persistent rigidity of the sterno-cleido-mastoid muscle or of the jugular indicates a lesion of the sinus; sinking of the posterior wall of the external auditory canal indicates extension to the antrum and points to the necessity for the opening of the mastoid. Persistent headache should be looked upon with suspicion. They may indicate brain abscess or other brain lesions. Vertigo also should be sorted out for careful watching, it may indicate extension of the suppurative process to the internal ear. These and other symptoms may exist for months and not be complained of nor be discovered in a superficial examination, and yet some day the patient may develop a fatal complication, or, rather, the complication already existing for months may extend and cause death. You should know the prodromal symptoms, both subjective and objective, which foretell extension to brain structures, and should look for these in all cases of chronic otorrhœa. You may be rewarded in only a case out of hundreds, but that one case will repay you for all your trouble, if not financially, at least you will be repaid by your own satisfaction.

The keynote in the treatment of an uncomplicated case (by that I mean a case in which there are no existing conditions pointing to necessity for immediate radical treatment) is the establishment of free drainage through the external auditory canal by removing everything which is in any way an obstruction to drainage. Such obstructions are various. Exostoses in the external auditory canal, a too small perforation, granulations, polypi, swollen mucosa of the tympanic cavity and cholesteatoma.

Exostoses should be removed if they form a *certain* barrier to drainage by chiselling them away.

A too small perforation with a thick discharge is a barrier and should be enlarged by incision.

Granulations, when large, may be removed with the aural snare or forceps; smaller ones can be treated with nitrate of silver, chromic acid, tri-chlor-acetic acid, or may be successfully removed by alcohol instillations in some cases.

Polypi should be removed with the aural polypus snare, or by means of aural forceps. Before attempting removal of a polypus, however, the attachment should be determined accurately by means of the aural probe. Great care should be used in removing a polypus from the roof of the tympanum. Experience has taught that these, by covering a necrotic area, have been a protection to the brain cavity, preventing extension of the suppurative process. The removal has formed an opening to the middle cerebral fossa and death has been recorded from such removal.

If cholesteatoma are present, as shown by their presence in the secretion or objectively in the tympanic cavity or attic, they should be removed by syringing or by means of the curette carefully handled.

This line of treatment, *i. e.*, the removal of all obstructive conditions, will result in a cure in many cases. Every aurist can cite numerous cases in which the removal of polypus has stopped permanently an otorrhœa of long standing, which was not affected by other treatment.

If, however, the removal of obstructive conditions does not result in complete cessaion of the otorrhœa a careful examination should be made for necrotic areas; these may be in the tympanic cavity, the attic or the antrum. A necrotic ossicle may be the cause of the otorrhœa; such an ossicle could be removed.

After thoroughly cleansing the external auditory canal and tympanic cavity and drying the field thoroughly, then, under good illumination, watch for the appearance of secretion; the direction of appearance will give you a clue as to its source.

When all obstructions are removed the author has found that many cases respond readily if a gauze wick is inserted. This wick may be plain or medicated. It acts admirably in carrying secretion to the orifice of the external canal, thus forbidding stagnation of secretion.

If the tympanic cavity shows a turgid mucous membrane, alcohol or alcohol and boracic acid solution instillations, together with the use of the gauze wick, will cure in many cases. If this condition is believed to extend to the attic, the solution should be applied with the attic syringe.

The solutions, proprietary formulæ, powders, etc., recommended for chronic otorrhœa are legion. Some have virtue, many are worthless. The author advocates free drainage, cleanliness and the use of all means to these ends, avoiding known irritating substances or solutions.

After failing along these lines to cause cessation of the otorrhœa, then the radical treatment by opening the antrum through the mastoid should be considered. There are a number of remedies which, taken internally, will aid in the treatment of these cases. Pulsatilla, Hepar sulphur, Hydrastis, Causticum and Dulcamara have all been used with good effect according to their indications.

PENETRATING WOUNDS OF THE EYE.

W. W. SPEAKMAN, M. D., PHILADELPHIA.

I feel I have the customary apology to make in attempting to present in a single brief paper so large and important a subject as "penetrating wounds of the eye," and in doing so, I shall make no attempt at exhaustive treatment, believing that the value of any paper lies in the clear presentation of a few plainly stated facts.

You all know that we rarely see *just* the bedside conditions in practice that are described in text-books, and seldom do we see in the reality precisely the pictures portrayed in an illustration. These variations, unless we have had wide personal opportunities for observation may lead us far astray, therefore, to cite individual cases and appearances can be of little avail.

Penetrating wounds of the eye are of comparatively frequent occurrence, not alone in factory and shop, but anywhere and everywhere in so many diverse and curious ways that it would likewise be unnecessary to enumerate them.

That they come always in the nature of emergencies and that the nearest available doctor, irrespective of his knowledge or special

experience, is usually the first to see them, is my real reason for presenting the subject, and for this I make no apology.

On this first observer, and what he does, *and how quickly* often depends the ultimate outcome. Hence one of two things is most essential, *either* that he know his business or realizes and that quickly, his professional limitations and his moral obligations to the patient. It is the twenty-four-hour interval immediately following accident that is the golden opportunity, and this time lost, in uncertain and vacillating delay, can frequently never be regained.

Inflammatory changes, exudates and opacification of the transparent media may make impossible a diagnosis that would have been clear twelve or twenty-four hours previous. True as this is in relation to diagnosis, it is even more important in operative interference, and operations are often robbed of all possibility of success by the lapse of a few days.

I make the plea for early and correct diagnosis and treatment strong, because too often the specialist sees the case when all the chances of treatment are gone, and he is obliged, with closed lips, to accept conditions as he finds them, or to stultify himself to protect his fellow pracitioner, and endorse his first treatment to save him from a law suit in the future.

If doubt and uncertainty, due to lack of experience, linger in your mind, then for God sake and the future comfort of your conscience, get assistance. That is the first point. If assistance be unattainable, the next step is Cocaine sterilized: 4 per cent. Cocaine, first of all, because Cocaine renders anæsthetic the eye and relieves to a large extent the blepharospasm accompanying injuries to the ball, and second, though of greater importance, because we must cleanse this eye, brow and cilia with soap and water, and soap and water we cannot use without rendering anæsthetic the eyeball.

In ophthalmology we must get our union by first intention, if at all; we never have corneal flaps heal by granulation, and not only must the hands of the surgeon be scrubbed, but the brow, lids, cilia and the conjunctival fold must receive thorough disinfection before we attempt instrumentation of any kind.

This may sound trite and an insult to your intelligence, but occasionally the very urgency of the case, a sudden penetrating wound, a nervous patient and sympathetic friends, may induce one to start before he is fully equipped with good light and proper appliances to make a thorough and careful examination.

We have here opened a normally closed cavity, and we ourselves, through undue haste, may introduce the infection we are seeking to avoid; as soon, gentlemen, think of sticking our unwashed hands into the peritoneal cavity as to replace a prolapsed iris without proper disinfection with unsterilized instruments, which should come immediately from boiling water to the field of operation.

I make this plea strong, also; time may be lost by attempted treatment with imperfect knowledge, but not in efforts in the direction of disinfection. The nature of the wound may be such as to preclude the use of the ophthalmoscope, owing to extravasation of blood in the anterior chamber or in the vitreous, but when it will be of service we should, after dilating the pupil, so far as is possible, avail ourselves of this aid.

What we shall find of probably more service is the biconvex lens with which we bring strong illumination to bear on the injured part. The next step in treatment after any operative interference that may be found necessary, is cold applied directly to the closed lids. This may be accomplished either by means of the ice bag or by moist compresses, taken directly from a lump of ice and changed sufficiently often to be kept cold, and the patient should be kept at rest in bed.

So many cases of penetrating wounds are allowed to be up and around with the consequence that they cannot follow out the treatment and will be constantly tempted to use the sound eye. As a general rule, cases which from the nature and extent of the injury do not call for immediate removal of the eye, require the use of atropine to place the ciliary muscle at rest and draw the iris back into the iritic angle, and away from the lens should it be injured in any way.

The atropine is best used in solution, 4 grs. to the ℥i of distilled water, and should be boiled previous to instillation. Occasionally if the wound be at the base of the iris or near the periphery of the cornea, with possibly a prolapse of the iris, Eserine sulphat., grs. ii to oz., may be preferable.

WOUNDS OF THE CORNEA.

Penetrating wounds of the cornea that do not injure the iris or lens, and are made by a smooth, clean instrument, leaving behind no foreign substance, though rare, are usually fortunate in their

outcome. Such wounds may be made by a knife point, needle or scissors point. More usually any impact sufficient to penetrate so hard a substance as the cornea passes on to do damage to the underlying tissues, the iris, lens and vitreous. Prolapse of the iris may occur in such if the escape of aqueous following the penetration come with a rush, such a prolapse will appear as a dark object lying on the wound aperture. If seen immediately following the injury, and if the iris be not lacerated or torn, gentle efforts may be made at reduction. If, however, exudate or adhesions have formed, or should the iris be lacerated, it will be advisable to remove the protruding part with forceps and scissors. Injury to the crystalline lens is one of the most serious complications in ophthalmic surgery, for, penetration of its capsule, allowing the aqueous to come in contact with the lens, leads immediately to great swelling of its fibres with opacity.

The rapid increase in bulk of the lens may lead to increase in the intraocular tension and the establishment of an acute traumatic glaucoma, this may call for frequent parencentia of the aqueous, or even removal of the lens itself.

Wounds penetrating the vitreous are of still more serious import, as infection and loss of the ball are the usual consequence. Should the sclera be punctured, we may, if conditions be favorable, that is, the wound clear cut and recent, and the presence of any foreign matter be pretty well excluded, suture the edges, being extremely careful to make no pressure on the eyeball, and thus cause a prolapse of the vitreous.

Wounds occurring in the ciliary region are especially dangerous, so much so that this has come to be known as the danger zone. Penetration by small particles, which remain in the eye, will call for special procedure in each case.

Particles of iron or steel may sometimes be removed by the use of the magnet if favorably located for its use, and particularly, if they can be seen in the anterior chamber or in the iris, but removal by the magnet is not the easy and simple procedure that we might suppose it to be. Nevertheless the magnet has prevented many mutilating and disfiguring iridectomies.

Removal of foreign bodies from the vitreous is a hazardous and usually an unsuccessful procedure. Penetrating wounds with, or without, the presence of a foreign body, that are sufficient in extent and character to render an eye not only useless, but to render

it liable to certain infection, should be met by enucleation, and where, after expectant treatment, it is evident that a panophthalmitis will ensue, we must resort to the same procedure for the safety of the second eye, and to save prolonged and useless suffering to the patient.

To conclude, I will say that penetrating wounds from the variation in their character and extent offer the widest opportunities for diagnosis, and finest distinctions of judgment in their management. No set rule and no set of rules can be formulated to guide us in the management of each and every case. Ophthalmic surgery is not, as many apparently believe, to be learned alone from text-books, but from long and varied practical experience, and brave, indeed, to the point of folly, is the man who undertakes the management of a penetrating wound of the eye with the self-consciousness of uncertainty bred by lack of opportunity and experience.

DISCUSSION.

Dr. E. W. Brickley: I suppose everyone practicing in the domain of ophthalmic surgery realizes the force of Dr. Speakman's remarks when he says we often get to see this class of cases entirely too late to render effective service. A number of instances present themselves to my own mind where, undoubtedly, vision was lost through the meddlesome interference of a general practitioner attempting to rectify matters outside of his own domain. As Dr. Speakman has said in his paper, the question of asepsis seems to be one which receives very little attention at the hands of the general practitioner in the domain of eye surgery, because, as a rule, he is called hurriedly, the patient is suffering, and about the quickest means at his hands are possibly an eye-dropper and a bottle of Cocaine. The eye-dropper is very seldom, if ever, sterilized. I wish to present a case which occurred in my own practice within the last three or four months, and I think it might properly be presented uner the heading of "What Would You Have Done?" The result has been of the happiest so far. Whether it will remain such only time will prove. The case in question came to me second-handed. During my absence from town a mechanic, working in one of our shops, was struck in the eye while chipping a piece of steel. He came to my office, found me out, and consulted some one else. That practitioner, having also an engagement out of town,

was obliged to recommend him, after temporary treatment, to seek advice elsewhere, and advised him to go at once to the neighboring city of Baltimore. While there a careful examination was made of the eye, and a radiograph made of it. The patient returning to town and finding the original practitioner absent, consulted me. I found this particular symptom, if you can call it a symptom, an entire absence of pain both at and since the time of injury. The entire body of the globe was filled with blood, the eye intensely hyperæmic, the pupil moderately dilated, of course more or less paralytic, no visible external wound of the conjunctiva or sclera, and I was not quite prepared for the diagnosis which accompanied the radiograph, which stated that a sliver of steel had penetrated the entire length of the scleral portion of the ball, and was lodged within the fatty tissue of the orbit on the nasal side. The question of what to do presented itself, and not knowing just what to do, I treated the case on the expectancy plan. There has never been an untoward symptom during the whole course of his treatment. There is absolutely no pain. The eye has been sensitive to light. There has been at times considerable tension, which I attributed, of late, to the injection of Atropine solution long continued than to any particular damage to the intraocular structure. The hæmorrhage has to some degree cleared up. Vision has remained nil, although the lens is not cataractized, the steel having traversed and failed to touch the posterior capsule. That sliver of steel remains in that man's orbit to-day. The question of sympathetic involvement of the other eye has been before me continually. Whether I am justified in allowing him to take chances under existing conditions, or whether I should have advised immediate enucleation and set all doubt at rest on that point, I do not know. When I saw that Dr. Speakman was to present a paper on this subject I took it upon myself, without permission, to cite this case, and should be very glad if men in my own particular line of work would take this particular case up and discuss it. We often find cases where we are practically at sea. We do not know what to do, and in some cases we find later on that had we instituted active measures and done a prompt enucleation our patient would have been much better off. I have here this little diagram showing the position of that bit of steel, situated seventeen millimeters back of the center of the cornea, eight millimeters below the horizontal plane, and twenty millimeters to the nasal side of the vertical plane, the size of it being

ten millimeters by one and a half by two. I should also say the conjunctival inflammation was managed principally by saturated solution of boric acid well filtered. I know that is a pretty stiff strength, but I have been using it ever since I have been doing eye work, and have never had any unfortunate effects from irritation. I think the principal trouble in using boric acid solutions, as a rule, is that they are not sufficiently filtered, leaving minute spicules in the saturated solution to give trouble by mechanical irritation.

Dr. H. K. Hoy: I would think that a pretty good rule to observe in such cases in regard to the enucleation of the eye would be to take into consideration whether the ciliary body is injured or not. If the ciliary body is injured I think enucleation should be performed. If the ciliary body is not injured, I believe a person would be justified in giving the patient a chance for the eye. I have reasons for thinking that in this case it does not appear the ciliary body was injured, so I believe the doctor has been justified in the course he has taken thus far in the case.

Dr. C. M. Thomas: I want to congratulate Dr. Speakman on the masterly way in which he has condensed the matter of penetrating wounds of the eye. I think for the general practitioner the first part of this paper is invaluable, the matter of the let-alone, hands-off warning, until the surface of the eye is clean, or has been prepared so that it can be cleansed thoroughly. So important do we consider this that we have a standing rule at the Hahnemann Hospital that no case of eye injury shall be touched with hand or instrument until first the surface be cocainized, and secondly, thoroughly cleansed with clean material. With reference to Dr. Brickley's case, I think it is quite evident that the course he has pursued was the correct one, as from the radiograph the course of the penetrating body was one entering posterior to the ciliary body, and as no severe inflammatory symptoms had arisen, showing septic involvement of the interior of the eye, the matter of the lodgment of a piece of steel, probably clean, is not of so much consequence, and it might have been extremely difficult to have found this piece of steel in the orbit even had the ball been enucleated. So far as I can see there is no justification for such an operation. It is hardly probable that sympathetic involvement could have arisen without first a suppurative process, and we know where the ciliary body is not involved, even in violent suppurative processes, sympathetic in-

flammation rarely occurs, even where the eyeball is entirely destroyed sympathetic trouble is rarely noticed.

Dr. F. W. Messerve: There is one thing in my mind that is quite important in connection with these cases, and that is, don't crow until you are out of the woods. You may have a case of such injury, the injury may be in such a location that you are doubtful in your own mind whether enucleation should take place or not. Again, you may feel it should take place, and the patient may object, as they have frequently done in our hospital work, and for the time being it seems as if they were correct in objecting, because after a shorter or longer time they appear to make a very good recovery, but do not be deluded by this condition of affairs, for sooner or later it may become a very serious condition, after the lapse of even a considerable time. There are a few symptoms set up in the other eye, which we speak of as sympathetic irritation. These are danger signals, and should be heeded at once, no matter how remote the period. Twenty years is not sufficient to make the other eye immune. We should warn patients at the time they leave us, make them understand there are other dangers, and if at any time there is a renewal of inflammation in the injured eye, or they have these first slight symptoms, loss of accommodation, near objects failing to be seen, or they fail to see them clearly, and they notice in connection with the attempt at near vision lachrymation they must consult an ophthalmologist at once and have his opinion. Usually if those symptoms are neglected they pass to the more serious ones of sympathetic inflammation. Then it is too late to remove the offending eye. Because a case apparently got well, I do not think the eye is saved or the patient is immune from all further trouble, because frequently they will have trouble later on, and then the removal of the offending eye is urgent.

Dr. W. W. Speakman: I have had also a case of foreign body which I saw within an hour following its penetration. I could see it plainly lying on the surface of the cornea or imbedded in the cornea, a bright polished steel, perhaps two millimeters long. I enlarged or attempted to enlarge, the entrance wound. The moment I touched the point the aqueous humor drained off, and I had a collapsed anterior chamber. Any of you who have ever tried to enlarge the opening in a collapsed anterior chamber know how difficult it is. It is almost impossible, except with scissors points, to enlarge or make a section where the anterior chamber is collapsed,

or where the iris is against the posterior surface of the cornea. I made what enlargement I could, and endeavored to extract the foreign body with a knife. I was handicapped by having no way of separating the lips of the wound to allow the exit of the small piece of steel. I have since had made at Lentz's a pair of German silver iris forceps, very narrow and small at the end, with the teeth left off, so we can introduce those into the lips of a wound and allow a spring of the instrument to separate the wound. Of course, we cannot take anything in the way of steel or iron near the magnet. The use of the magnet demands a new set of instruments that are non-magnetic. My efforts to remove this piece of steel with a magnet were unsuccessful, and in endevoring to remove it with a pair of iris forceps I pushed it still further into the iris, and it disappeared posterior to the iris. It hung as though balanced. The mere pressure of the instrument against the steel pushed it back of the iris, between the iris and the lens, so it disappeared from view. There was nothing left to do. The anterior chamber was collapsed. The young man declined to have an iridectomy performed with the uncertainty of removing the steel then. It was possible it was pushed clear through the iris, back in the posterior chamber between the iris and the lens. We treated that by expectant treatment, cold applications and rest. He has that piece of steel to-day. In three or four weeks the eye became perfectly quiet, and unless future oxidation of the steel will cause trouble I see no reason why it should not lie back of the iris. I think that is all except this point: We must all remember where the crystalline lens has been injured, that where a small injury in the lens capsule allows the gradual escape of the lens substance, that case will be very prolonged. The injury from a sewing needle I spoke of was sixteen weeks before there was a complete absorption of the lens, during which time I needled the case twice. It seemed so long and tedious, and the woman was kept out of employment so long, that I took some risk in opening the lens capsule further while the eye was not perfectly quiet. It was followed, however, by no reaction except the escape of more lens substance. It hastened the recovery of the case somewhat.

OCULAR DEFECTS; THEIR RELATION TO MENTAL BACKWARDNESS IN CHILDREN.

G. W. STEWART, M. D., PHILADELPHIA.

By mental backwardness is here meant that condition the mind suffers during its formative period by reason of defective sense organs imparting faulty perception, and thereby protracting the period of the development of discriminative or completed knowledge. A thorough comprehension of such a retarded mental evolution is impossible in the absence of an accurate understanding of all important *role* played by the sense perceptions in the upbuilding of a rational human intelligence.

There is perhaps no fact so liberally conceded as that consciousness is the offspring of experience. The obverse of consciousness, relatively speaking, is nothingness. The first awakening of consciousness is secured through the sensation of an internal response to an external stimulus; such a sensation constitutes an experience. If the organism be capable of receiving a variety of impressions differing in quality, the scope of consciousness is correspondingly amplified. The greater the number and variety of experiences, the greater and more luminous does the consciousness become. For the internal consciousness to be awakened by external stimuli, it involves of necessity that there be a medium of communication. In the higher and more complex organizations the media of communication are exclusively the more or less highly developed organs of special sense. In the absence of these special senses, the development of what we know as mind is inconceivable. By the term "mind" we crudely convey the idea of thought and thinking, and by "thought" we express that operation of the mind in its endeavor to correlate experience, and define them to itself in the terms of consciousness. By pursuing this line of reasoning further we understand that "intelligence" is simply the index of the mental capability to rearrange the received impressions, and in turn transmute them into judgments that shall govern acts and formulate ideas.

It will, therefore, be readily understood that from the earliest dawn of consciousness, up to the highest developed intelligence, there is an unceasing and constantly accumulating stream of sensa-

tions, impressions, experiences being transmitted from external sources to the internal recipient mind, conveyed thereto by the avenues of communication which are exclusively the special senses, and, moreover, that without these communicative avenues the evolution of intelligence, mind, even consciousness itself is impossible, indeed, utterly unthinkable.

This being admittedly an unalterable fact, it is rational to insist that a prerequisite to the development of a relatively perfect intelligence is a relatively perfect physical development of the organs of special sense, and conversely, it follows of logical necessity that defective sense organs must, and do, transmit defective impressions, and furthermore, that within a consciousness thus developed, the thinking faculty inevitably constructs its standards upon defective data, subsequently leading to faulty judgments and imperfect ideas.

The sphere of perception is the entire realm of external phenomena. All that we can ever know of the world of sensible objects we apprehend through the instrumentality of those bodily organs, whose function it is to convey to the mind a perception of those material objects with which they come into contact. The perception of an object by the mind is the first step in the elaboration of a knowledge or understanding of the thing presented. Upon the accuracy and clearness of the perception rests, fundamentally, the power to formulate accurate conceptions of the attribute of things, and by intelligent association and comparison of the characters, common and uncommon, to assign them their proper place in the world of phenomena. Such a mental act, combined with judgment, constitutes knowledge, and knowledge is the desired end in the early training and education of the youth.

It is a common saying that "our earliest impressions are the most lasting." That such may be the case is easily conceived, when we remember that in the plastic and as yet immatured mind of infancy the comparatively sudden perception of strange and novel forms and dimensions create impressions that become the sole data upon which the subsequent discriminative intelligence is founded. Through one or more of its communicating organs of special sense the child perceives an object. It does not *know* it. There is presented simply a mental picture corresponding in some degree, with the nature of the external object, from which the stimulus emanated. The degree of accuracy of this perception is proportionate to the ability of the special sense to accurately transmit the stimulus. In this

manner the substratum of knowledge is laid, and for this reason the earlier impressions are ever the clearest, inasmuch as they constitute the permanent standards wherewith matured judgments are compared.

Enough has been said, and persistently reiterated in altered phrascology, to emphasize the conclusion that the basis of an accurate mentality is an equipment of physically perfect organs of special sense. Given two children possessing originally equal brain potency, the one having relatively perfect sense organs, the other having uncorrected deficiencies in one or more of them, the former will inevitably outstrip the latter, ultimately in habits of exact mental discrimination. This species of mental backwardness in the latter can be ascribed only to inaccuracy of perception. A concrete example is presented us by two artisans of equal skill being unequally equipped with the tools necessary to their art.

No one will venture to assert that if the Chaldean astronomers had possessed the apparatus of Prof. Pickering that their deductions would have been any the less accurate than his own, and yet, from the standpoint of accuracy, the Chaldean astronomer, for lack of accurate data, is mentally back of the modern observer. The analogy here holds good for the human brain, which is a veritable observatory. Within its dark and obscure enclosure the mind takes cognizance of the images presented to it. The only instruments wherewith it holds communication with the outer world are the five special sense organs. Whether the images presented be true or false the mind has no conscious means of determining, they are the working material out of which it constructs its final conceptions, eventually to be synthetized into complete knowledge. "What the senses perceive to the thinking mind is *true*."

The special senses are five in number, each of them having as its special mission the conveying to the consciousness an attribute of matter. Occlusion or defect of any one of them at the period when consciousness is just awakening from its unconditioned sleep very obviously either obscures entirely or falsifies in some degree the perceptions necessary to a normal understanding of the world of objectivity.

With the exception of the sense of vision, all the other means convey their impressions to the mind as sensations, and in this respect the sense of seeing is superior to them all in the presentation of accurate perception. The stronger the sensation the weaker

the perception, the stronger the perception the weaker the sensation. In sight there is a maximum of perfect perception and a minimum of sensation. In viewing an ordinary object we are not conscious of any feeling, although we are conscious of a decided knowledge of its attributes; the knowledge of its proximity to us, of its form, size and color is perfect beyond that given by all the other senses combined. Audition conveys much less knowledge than vision, and at the same time far more sensation. In the other sensse feeling greatly predominates with the perception correspondingly slight. Thus we see that of all the senses vision is pre-eminently the most important factor in the evolution of conscious intelligence.

The physiological function of the eye is to convey a sensation which we term "light." Moreover, as all external objects reflect light, the consciousness is enabled to perceive not only the existence of light, but likewise the direction from which it proceeds, and color, form, size and distance of the luminous object. The apparatus essential to this accomplishment is necessarily of exquisite sensitiveness, and capable of the most accurate adjustments. Any unequality, however slight, in the complicated mechanism, results in a disturbance of the harmonious balance, with a consequent perversion of the transmitted sensations affecting our consciousness. If such perversions be present in early childhood, during the mentally formative period, the disastrous effect upon the subsequently evolved powers of discriminative judgment is readily discerned.

Intelligence is based upon the knowledge of a thing in relation to its attributes or to some other thing. To make comparisons of objects involves that they occupy different points in space. The perception of space is imparted to consciousness by the refraction of light vibrations upon a definite point on the retina. This infinitely minute irritation localizes the point from which the radiations emanate. By bringing the muscular mechanism into play the spatial perception is materially assisted. The eye travels from one point on the object to another, and to different objects, and from the size and shape of the microscopic retinal image, the mind is enabled to judge the spatial relations of the thing perceived. Hence *accurate spatial perception* is dependent upon normality of refraction and harmony in the muscular adjustment

The *perception of distance* depends to a great extent upon the knowledge of actual size. Knowing the dimensions of an object we

judge of its distance by the size of the retinal image. Distance can be judged only by comparing the image on the retina with the known size of the object, or with another object with which the mind is familiar. The accurate perception of distance requires a considerable degree of experience in comparing the spatial relationship of sensible objects which imparts a knowledge of size. The judgment is aided in this respect by the act of accommodation, which enables us to estimate relative distances with comparative accuracy within two or three meters distance from the eye. Children, from want of experience, and from faulty perception, are liable to constantly misjudge distance.

The estimate of areas and angles is similarly one of comparison and involves accurate perception to formulate standards of judgment.

If the eye receives too little or too much light, the accuracy of spatial perception is affected. Intense illumination apparently increases the size of an object, too little renders it smaller or indistinct, both the retina and the state of refraction may here be responsible for error. It is not within the scope of this paper to discuss at greater length the significance of an accurate conception of space, distance, from size and color in the construction of what we call "mind." Suffice it to say that defects in the visual apparatus will inevitably, in the degree of their magnitude falsify the perception and thereby materially retard a proper mental development.

Mentally backward children are not necessarily mentally deficient. Neither are all mentally backward or mentally deficient children wanting in a relatively perfect development of the special sense organs. If, however, we exclude those who are simply healthfully indolent, and who exhibit a disinclination for study, and the discipline of school life, and, on the other hand, those who inherit a low grade of intelligence, and those who are the victims of congenital degeneracies, it will be found that in a large per cent. of the remainder there exists a defectiveness in one or more of the organs of special sense.

An examination of the children in the public schools of Philadelphia during the past year, made by the medical inspectors, developed the fact that among the non-exempt pupils 20.31 per cent. exhibited defects of the sense organs, while in the exempt pupils the percentage of these same deficiencies fall as low as 7.7 per cent.

Moreover, among the defective non-exempt, 50.9 per cent. exhibited defects of the visual sense.

Had this examination been conducted with the end in view of determining the causes that contribute to non-exemption, and had the healthfully, indolent, truant and mentally deficient pupils been separately classified, it would doubtless have been discovered that mental backwardness, in the sense here under discussion, was associated with the defectiveness of the sense organs in nearly every instance.

Unfortunately, the literature of ophthalmology is singularly meagre in reference to this important relationship of ocular defects to mental backwardness. It has been generally assumed that defects of sight and hearing are but annoying obstacles in the way of progress, and are, therefore, too often overlooked and neglected.

A consideration of the serious consequences entailed upon the developing mind by reason of faulty sense perception will inspire the intelligent physician with a deeper consciousness of his duty towards chidren, and will urge upon him the grave importance of painstaking investigation, and the early correction of defectiveness of the sense organs when found.

Disturbances in the function of these organs are rarely discovered until the child has reached the school growing age, when they are usually detected and corrected. Prior to this the childish mind had been the recipient of false impressions that have been deeply engraved. In the subconscious mental effort to rectify these faulty perceptions the mind experiences confusion, with the result that clear, direct and accurate habits of thought become impossible.

Parents should be made aware of the vital necessity of submitting their children to an early examination of the sense organs, and the prejudice against children wearing glasses should be abolished.

Refractive errors and errors in the muscular adjustment should be vigorously searched for, and whenever practicable, immediately corrected, at the same time the other organs of special sense should receive the same attention.

If such a procedure could be systematically observed among all children, thousands of little victims of faulty sense perception would be spared the humiliation of being classified as mentally backward, and in addition, and of infinitely greater importance, the degree of intelligence would be lifted to a much higher plane.

A PLEA FOR MORE CAREFUL DIFFERENTIATION OF NASAL DISEASES, WITH ILLUSTRATIVE CASES.

J. W. STITZEL, M. D., HOLLIDAYSBURG.

Fellow members of this Society, how often are you asked the question, "Doctor, can you cure catarrh?"

The laity seem to be imbued with the idea that catarrh is an incurable disease, and all that we can do is to administer palliative measures.

Now, who is responsible for this fallacy upon the part of the laity? From personal observation I am convinced that nearly all cases of nasal disease are diagnosed by the general practitioner as catarrh. And while it is true most cases of disease of the nose have an associated catarrhal condition, few cases of long standing are uncomplicated cases of chronic catarrh.

In the great majority of cases the catarrh is only an associated condition, and the real cause of the trouble is found to be one of the numerous causes of nasal obstruction, as a deflected septum, septal spur, enlarged turbinated body, nasal polypi or adenoid vegetations.

On the other hand, we may have, and too often do have, an unrecognized disease of some of the accessory sinuses.

It is just as sensible to expect to cure a case of chronic diarrhœa with opium suppositories as to expect to cure a nasal catarrh with an obstructed nares or an associated sinusitis without first removing the cause of the nasal obstruction, or applying the appropriate treatment to the diseased sinuses, as the catarrh in these cases is only a result of the condition just mentioned, and you will find in the great majority of cases of nasal disease catarrh is only one of the symptoms of the whole trouble, and as true followers of Hahnemann we should get at the totality of the condition.

For a thorough understanding of the subject under consideration it will be necessary for me to give a brief description of the anatomy of the internal portion of the nose.

The nasal passages have been aptly termed double air tunnels, beginning at the anterior nares and continuous posteriorly with the pharynx.

These tunnels are separated from each other by a thin partition

of bone and cartilage, the bony portion predominating and forming the posterior portion of the partition.

Normally, the septum is vertical, but after the seventh year it is quite frequently deflected, usually to the left, this condition being known as deviation of the septum. The septum forms the inner walls of the nasal passages. The outer walls are very irregular, being made so by three and sometimes four shelf like processes of bone which project inward toward the septum, but do not touch it, and from their scroll like form are called the turbinaed bodies.

They gradually increase in size from below upwards. The third, the superior, is quite small and projects almost vertically from the roof.

Beneath the superior is the middle turbinated, larger and broader and more rolled at its center than the superior, and projecting horizontally instead of vertically.

It is on the anterior free margin of this turbinate that we find a small elevation directed downwards, the Aggar nasi, and opposite a corresponding slight elevation on the septum.

These two points are important, as they mark the line between the olfactory area above and the respiratory area below.

The inferior, or lower turbinate, is the longest and largest of the three, and assumes more nearly a horizontal position. It differs from the rest in being a separate bone.

Underlying these shelf like processes of bone, or between each adjoining pair of turbinates, and between the inferior turbinate and the floor of the nose, is a depression or space known as a meatus.

These spaces from above downward being known as the superior, middle and inferior meatuses.

Into these meatuses open the accessory sinuses, which, on account of their direct communication with the nasal cavity, are liable to infection through a direct extension of diseased processes involving the nose.

The middle meatus is of special interest or importance in the discussion of the subject under consideration, for opening into the middle meatus we have the canals from the frontal sinuses, the infudibuli, the anterior ethmoidal cells and the antrum of Highmore. Within this meatus we have a crescentic opening, the hiatus semilunaris.

This opening continued upwards leads into the frontal sinuses and downward into the antrum of Highmore.

From what I have just said you will appreciate the difficulty in telling just which of these cavities is affected when we have a collection of pus in the middle meatus, due to suppuration of either of them.

And you will also appreciate the fact that the antrum of Highmore frequently becomes infected from a direct drainage of pus from the frontal sinuses into the antrum of Highmore, in case of an infection of the frontal sinuses, or a frontal sinusitis.

It is often a difficult procedure to tell just which sinus has been primarily involved, and from the location of their openings, it is often impossible to tell by simple inspection from which sinus the discharge is coming, and we have to resort to trans-illumination or an exploratory operation for the purpose of inspecting one or both sinuses.

Opening into the superior meatus we have the posterior ethmoidal cells and sphenoid sinuses.

The accessory nasal cavities or sinuses are four in number, the sphenoidal, ethmoidal, frontal and maxillary or antrum of Highmore.

Of these the sphenoidal sinuses are two irregular cavities in the body of the sphenoid bone separated from each other by a thin plate of bone.

They are absent in children, but develop as age advances. They open into the superior meatus at its upper and posterior part.

The ethmoid sinuses, more properly termed the ethmoid cells, are found in the lateral mass of the ethmoid bone, and are composed of a number of small cells, thus resembling the mastoid cells, and are divided into three groups, the anterior, middle and posterior ethmoidal cells, the groups being separated by thin partitions of bone. The posterior cells are less numerous than the others, and occasionally communicate with the sphenoidal sinuses and open into the superior meatus. The anterior ethmoidal cells open by means of small orifices into the canals from the frontal sinuses, which open into the middle meatus at its extreme anterior portion at the hiatus semilunaris.

The frontal sinuses are two small cavities lying between the two tables of the frontal one and extend some distance over each orbit, giving rise to the prominence over the root of the nose.

They, like the sphenoidal sinuses, develop with advancing age. They communicate with the middle meatus by the infundibuli.

The antra of Highmore or maxillary sinuses are the largest of the accessory cavities. They vary much in size in different races and also in the same individual. One may be much larger than the other or entirely absent.

These cavities are situated one in the body of each superior maxillary bone. The floors of these cavities are formed by the alveolar process of the superior maxillary bones, and the roots of the first and second molar teeth are often found projecting into these cavities.

They open into the middle meatus near the posterior part of the hiatus semilunaris by a circular opening, the ostium maxillare, occasionally we have a second opening behind this, the ostium maxillare accessorius.

The nasal cavities and accessory sinuses are lined with a mucous membrane. This membrane varies greatly in character in different localities, in the upper or olfactory area we have tesselated epithelial cells and the color of the membrane is yellowish pink, while the lower or respiratory area is lined with ciliated epithelium, and the color is a light pink. The deeper layers of this membrane, or the sub-mucosa, which lies in contact with the inferior turbinate, the crest of the middle turbinate, and the corresponding part of the septum is chiefly made up of an erectile cavernous tissue, the venous network forming large cavernous sinuses rendering them capable of sudden distention under vaso-motor disturbance.

This accounts for the sudden closure of the nose so common in acute colds in the head or acute rhinitis.

The first principle of a healthy condition of the nasal passages is free and unobstructed nasal respiration.

Any deviation from this is sure to produce disease of the nasal mucous membrane.

How often we see cases of deflected septums later in life that are due to some neglected injury in early life.

Possibly no attention has been paid on the part of the parents to a fall on the face, or some like injury to the nose, as a blow on the nose, or the family physician has been called in and after a superficial examination declares the little patient will be all right in a few days, and we have laid the foundation for nasal obstruction and consequent mouth breathing with all its dire results; as pharyngitis, frequent attacks of bronchitis, etc.

Or on the other hand the injury may have been so slight as to only

interfere slightly with free nasal respiration, yet we have the foundation laid for future catarrhal condition due to the irritating presence of a nasal spur.

This class of cases are easily prevented, if proper attention is paid to them and a careful examination made at the time of the injury.

The same may be said of the infective cases of rhinitis so prevalent during epidemics of la-grippe.

Many a case of suppuration in one or more of the accessory cavities is allowed to continue untreated until the discharge causes the actual destruction of tissue within the nasal cavity, and we have a marked atrophy with an ozaena.

It is not my intention to discuss the question whether the crusts and offensive discharges of atrophic rhinitis come from the mucous membrane or from the accessory sinuses, but in my own experience every case of atrophic rhinitis with crust formation and foul odor or the so-called ozaena coming under my observation has been directly traceable to a suppuration in some of the accessory sinuses, and while these cases were markedly benefited by the ordinary methods of treatment, as thorough cleansing followed by the application of stimulating drugs to the nasal mucous membrane, yet the disease was not cured until appropriate treatment was directed to the diseased sinus.

There is no doubt in my mind that the accessory sinuses are much more frequently affected than is commonly supposed.

Many cases of acute sinusitis run their course and get well without any treatment like any other acute disease.

But a certain percentage do not tend toward recovery and through failure in diagnosis we have the foundation laid for a future ozaena.

Pus in the middle meatus should always arouse a suspicion of some trouble in the accessory cavities.

You will see cases who after repeatedly blowing the nose forcibly until apparently there is no more secretion, but apply some astringent to the middle meatus and they will or can expel large quantities of pus and mucus.

Where was this secretion? Certainly it was not in the nasal passages proper; for if you take into consideration the fact that the nasal passages are practically straight tubes the secretion would certainly have been expelled at the first effort.

Considerable quantities of discharge escaping at one time can only originate in one of the large cavities, as the antrum or frontal sin-

uses, and by reducing the turgescence within the nose the exit of the sinuses has been opened more freely, thus allowing free drainage, and the suction caused by the expulsion of the air due to the forcible expiration has tended to empty the sinus affected.

Wherever you have large accumulations blown from the nose periodically, look for trouble in the accessory sinuses.

The position of the head of the patient has a great deal to do with the drainage of the different cavities and the consequenut easy escape of secretions.

The antrum is most easily drained when the head is inclined forward and to the opposite side.

In patients giving you a history of a flow of pus from the nose or throat on awakening in the morning and sitting up in bed from a nostril which till then had been free from discharge, you will usually find the trouble in the antrum, and the suspicion of antral trouble is strengthened if we have pus in the middle meatus after having the patient bend his head forward to between the knees and at the same time incline it to the opposite side.

The other sinuses are best drained when the head is erect. But if you find pus in the middle meatus remember it may also come from the anterior ethmoid cells or the frontal sinuses.

It is not my purpose in this paper to go into a detailed description of the various methods of diagnosing sinus diseases by trans-illumination, exploratory puncture, etc., for these belong to the province of the nose and throat specialist, and after all the diagnosis can only be established by the actual presence of proof of pus in the diseased cavity, and it is very difficult in many cases to tell from the presence of pus in the nasal passages, just which cavity is affected.

It is sufficient for my purpose to establish the fact that pus is coming from one of the accessory sinuses.

Neither is it my purpose to describe the various forms of nasal obstruction that lie at the foundation of most cases of catarrh; for certainly every physician who attempts to treat diseases of the nose can easily demonstrate to his own satisfaction with a nasal speculum and a head mirror, the presence of a nasal spur, deviated septum, enlarged turbinated or nasal polypi causing the obstruction.

Yet I am convinced that very often, at least too often, cases of so-called catarrh are simply prescribed for without making the slightest effort to inspect the nose and discover the cause of the trouble.

Is it any wonder under such circumstances little or no results are

obtained, and the laity are impressed with the fact that catarrh is an incurable disease, and that treatment at the best is only palliative?

To better illustrate the truth of what I have just said, and at the same time simplify my subject, let me cite a few cases that have come under my observation within the last two years.

Case I. Miss B., aged 12 years. Had been treated for four or five months with some benefit, but trouble had returned. Mother said she was continually sniffling and blowing something from her nose and could not breathe properly through the nose.

On inspection I found both nostrils partly occluded and filled with mucus, and nasal mucous membrane was much swollen.

After treating her a short time with little improvement, I examined her more closely and discovered adenoid vegetations, which were causing a continual passive congestion of the nasal mucous membrane with consequent formation of mucus and stoppage of the nose.

The trouble promptly disappeared with removal of the adenoids.

Case II. A. S., age 14. Had been treated about a year for catarrh. His mother told me that he was very restless at night.

Could not get his older brother to sleep with him; for he threw himself all over the bed and was very restless at night.

At times could not breathe through the nose.

On examination I found left nostril completely filled with polypi which even hung down into the pharynx.

I removed fourteen at two sittings, the last one being the largest polypus I ever saw, and is the larger of the two specimens contained in this bottle.

Of course, being in alcohol it is greatly shrunken, but at the time it was placed in the bottle it required some force to get it in the bottle.

It hardly seems credible that such a condition could exist without being discovered. Certainly not if any effort had been made to look into the nose, but I have seen a number of similar cases.

Case III. Mrs. C., age 60. Came to me to be fitted with glasses. On examination I found vision in right eye reduced to $^{5}/_{200}$ with marked contraction of field of vision.

On questioning her more closely, I found she had been treated for some time for catarrh. Said she was having a great deal of pain in the head, had a marked tenderness under the right orbit and a foul discharge from that side of the nose.

On inspecting the nose I found pus in the middle meatus. Her condition dated back to an attack of la-grippe about a year previous to visit.

By appropriate treatment to the diseased sinus she made a complete recovery with return of good vision.

CASE IV. Miss F., age 20. Came to my office for treatment for a typical case of atrophic rhinitis with crust formation and foul discharges from the nostrils.

Crusts formed in both nostrils, but worse on the left side. After treating her for some time the crust formation disappeared entirely on the right side but continued on the left side, although crusts were lessened in quantity and odor had nearly disappeared.

On closer inspection, I discovered I could stop the crust formation by plugging the middle meatus.

The whole trouble disappeared promptly upon directing the proper treatment to the diseased sinus.

CASE V. M. S., age 12 years. Called at my office accompanied by his mother, who wanted to know if I could not give him something for his breath, as he could hardly get his breath on exerting himself unduly.

He had been taking medicine for some time without relief. I looked at his nose and found a marked deviation of the septum to the right side.

I questioned him carefully and found he had been struck on the nose with a base ball about fifteen months previous to this, and had said nothing about it to his parents for fear of being punished, but he acknowledged his trouble dated back to the time of the injury.

On the opposite side from the deflection he had a marked compensatory hypertrophy of the inferior turbinated body, which I first reduced and then straightened the septum and he had no further trouble with his breathing.

CASE VI. My last case illustrates the fact that even the nose and throat specialist at times does not carefully differentiate his nasal cases.

Mr. M., age 21 years, was brought to me last April by a graduate of last year who had diagnosed adenoids, and wanted me to remove them.

On taking a history of the case I found patient had been treated daily the whole of last December by a well-known nose and throat specialist for an ordinary naso-pharyngitis.

He had a great deal of mucus in the nose and throat, nasal mucous membrane was much swollen, turbinates enlarged, nares obstructed and had a gradually increasing deafness.

After reducing the turgescence in the nasal passage, the adenoids could be plainly seen hanging down into the pharynx.

I removed the adenoids entire with Gradle's adenotome, as shown by this specimen, which of course is greatly shrunken.

How the adenoids could have been overlooked in this case is hard to understand, yet as I said before, one of Philadelphia's most prominent nose and throat specialists failed to discover them.

I could cite many more cases, but time will not permit.

It is not my purpose in this paper to take up the treatment of nasal diseases.

But let me say in closing, that while you may benefit the catarrhal condition by cleansing the nostrils and applying the various sprays and local applications to the nasal mucous membrane, thus aiding drainage and protecting and stimulating the mucous membrane, yet you can only expect to cure your cases by going to the very fountain head of the trouble, and if the catarrh is due to nasal obstruction, remove the obstruction and if due to disease of the accessory sinuses direct the appropriate treatment to the diseased sinus, and you will cure your cases and the laity will no longer have reason to doubt the curability of catarrh.

DISCUSSION.

A MEMBER: I would like a little enlightenment on how to treat those sinuses.

DR. J. W. STITZEL: I think the general practitioner is not in a position to carry out the operative measures. In many of those cases if you do not have a marked involvement you can reduce them by simply using some application that will reduce the congestion in the meatuses.

In more chronic cases I have found good results by the application of about 30 per cent. of ichthyol in glycerine direct to the meatus. If you remove the anterior portion, at least about one-half, and remove the middle turbinate, you can get down and cleanse it in that way, but I am speaking, of course, when it comes to methods of diagnosis. I used the illumination tube frequently myself, but you cannot always depend on what you see. You may apparently have

trouble and have not, but the thing to get at in these cases is drainage. You can see how hard it is for the antrum to be drained.

DRAINAGE IN ACUTE OTITIS MEDIA.

CHARLES M. THOMAS, M. D., PHILADELPHIA.

I am led to the writing of this brief paper by a number of recent experiences with acute otitis media, where, from insufficient drainage, more or less unpleasant conditions have arisen.

Of these I will cite the following:

(1) Grippe followed by earache. Attendant had ordered Mullein oil, internal remedies and hot salt bag.

After three days of suffering, appearances of watery fluid at meatus with relief of pain.

Discharge promptly became purulent with renewal of pain followed by fever and tenderness over mastoid.

Examination showed foul, musty smelling pus in canal. Removal exposed small perforation at middle of m. t. A free L shaped incision to bottom of membrane was made, and prompt abatement of symptoms followed.

Error. Delay in drainage and lack of cleanliness.

(2) Small boy had sore throat and earache after long bicycle ride against cold north wind.

After two days of usual remedies severe pain and fever, thin discharge and relief of suffering.

Pulsatilla had been given internally but no local applications; the patient not permitting.

In twenty-four hours repetition of earache, discharge continued for five days previous to my visit, each night great suffering with moderate relief during the day—patient hollow-eyed, feverish and irritable. Pin hole opening in posterior inferior segment of drum.

Free opening with antisepsis, gave immediate relief and prompt recovery.

Error. Reliance on insufficient perforation, though well located.

(3) Intense pain and prostration. Drum punctured by attendant three times with relief for twelve to twenty-four hours after each operation. Mastoid became painful with tenderness and œdema. Found opening in drum small and high.

On account of urgent mastoid symptoms not only enlarged perforation in m. t. but also opened mastoid antrum evacuating considerable pus. Cure prompt.

Error. Opening for m. t. by puncture instead of incision and in bad location for drainage.

(4) Physician, believing in internal remedies alone, had suffered greatly from pain and prostration for eight days. Day before my visit a discharge of pus, but no relief of pain, which now involved mastoid. Enlarged the small perforation and opened mastoid which showed entire destruction of cells. Slow recovery.

Error. Delayed evacuation.

(5) Similar case, no discharge. Brain symptoms. Paracentesis evacuated pus. Mastoid operation showed entire destruction of cells, erosion of roof of antrum, purulent meningitis, death.

Error. No drainage.

When one sonsiders the large number of cases of greatly impaired hearing and chronic, foul discharge which yearly follow the ordinary inflammation of the drum cavity, and further, when it is borne in mind that by far the greatest proportion of cases of meningitis and practically all cases of brain abscess are of otitic origin, it is surprising that the management of the acute otitis media and mastoiditis does not receive more serious consideration at the hands of the general practitioner.

The idea is certainly too prevalent that earaches are unimportant affections which will take care of themselves.

That there is a distinct element of danger in the so-called conservative treatment of acute otitis media cannot be too strongly emphasized.

On account of the close anatomical relationship between the tympanum and the naso-pharynx by way of the Eustachian tubes on the one hand, and the cells of the mastoid by way of the aditus on the other, any acute naso-pharyngeal inflammation is liable to set up an otitis media from which an inflammation of the antrum is a most natural sequence.

In fact, many of us now believe that otitis media is hardly possible without a corresponding inflammation of the antrum.

If the fact is borne in mind that where the drum is inflamed by invasion from the pharynx, the lumen of the Eustachian tube is almost invariably so tighly closed by swelling within its bony walls as to prevent evacuation of a tympanic exudate by this route, it is

plain that the tympanum and mastoid antrum may under such conditions present practically a closed double chamber more or less distended with the products of inflammation, which, if they do not organize or undergo absorption, must seek an exit in some direction.

If the exudate fails of absorption or should it become purulent, the most favorable outcome lies in the evacuation of the discharge through the m. t., into the external canal.

But unfortunately the drumhead at times fails to give way under the pressure, and the exudate finds its way through the roof of the tympanum or antrum to the membranes of the brain or by the mastoid cells to the great venous sinuses, with disastrous results.

When, therefore, we do not secure by our treatment of the naso-pharyngeal catarrh a prevention of the exudate or its absorption in the prepurulent stage, the case may be looked upon as a surgical one and should be treated on strictly surgical principles, *i. e.*, the exudate should be drained through the least important structure, the membrana tympani, away from vital organs or regions, and in such manner as to secure the most complete and permanent evacuation of the cavity.

If this be conceded the only question remaining is as to when and where the drainage opening is to be made, and in what manner. Briefly, the symptom *pain* will alone in a great measure furnish us the indication as to the time for doing a paracentesis.

Although in the pre-exudate stage paracentesis is not usually called for, it may, when in spite of medical treatment, the suffering of the patient is great or continuous, prove an important means of relief, and much modify the attack, and should be carried out without hesitation, *provided* one is assured that the previous treatment has been such as to place the auditory canal in an aseptic state. I emphasize the word provided, for while we may say that a properly done paracentesis is a harmless operation in itself, there is always present the possibility of introduction to the drum cavity of septic material from the external canal. On this account, if for no other, the management of the early, or pre-exudative stage, should always include, when possible, a careful cleansing of the external canal, and a more or less continuous instillation of a warm antiseptic material such as Bichloride of mercury, 1-5000, or preferably, a solution of Carbolic acid in Glycerine, 30 to 50 grains to the ounce. This latter preparation is a most valuable one, first, as an effective

antiseptic, secondly, as an analgesic, and thirdly, as a depletor of the drum cavity through its osmotic action.

When no antiseptic has been used in the early treatment, time should always be taken before a paracentesis to make the canal as nearly as possible surgically clean.

The importance in opening the drumhead lies, however, not so much in the relieving of the pain, as in furnishing free drainage to the tympanum; but here again *persistent pain* will furnish us a reliable guide as to the time for action. A considerable quantity of aseptic exudate may lie harmlessly and painlessly in the tympanum, and later undergo absorption without perforation; but so soon as it accumulates in such quantity as to cause dangerous distention of the drum, and particularly if it become purulent, pain will set in. The more rapid and the greater the distention and possible purulency, the greater the pain. Conversely, continued *pain* means distention and probably purulency, and unrelieved distention means danger to other important structures; and the greater the suffering and prostration, the greater the distention and risk of invasion of other structures and the more urgent the indication for drainage by the external canal.

Deafness, fever, prostration and bulging of the drumhead furnish further additional indications for, and certainly add to the urgency of the operation, but I believe them to be secondary in importance to the pain.

When the careful medicinal prescription, local treatment of the nose and pharynx, and the instillation of hot antiseptic solutions (particularly carbolized glycerine) into the external canal fail to relieve the pain of an otitis, we may conclude that the tympanic and possibly the antral cavity is over-distended with exudate, and should be opened and drained without delay, not only for the comfort, but for the safety of the patient.

And just here, before speaking of the operation itself, let me enter a protest against the too common practice of treating these cases by introducing into the auditory canal, substances for the relief of pain, which may contaminate the lining of the canal and the drumhead, such as poultices, roast fig, roast onion, hot oil and laudanum, Mullein oil, etc., which are of most doubtful efficacy, and serve mainly to befoul the canal and add greatly to the difficulty of properly preparing the surfaces for a paracentesis.

I have no doubt but that this little operation would not be so often

delayed or omitted, were it not for the difficulty in rendering the procedure painless without a general anæsthetic.

The application to the drumhead of a pledget of cotton soaked with a mixture of equal parts of crystallized carbolic acid, cocain and menthol (Bonain mixture), has, in my hands, almost invariably enabled me to secure a satisfactory anæsthesia of the parts. To get the best results with this preparation, however, one must make sure that it is made of the pure crystals of each of the ingredients, that the lower end of the canal and the membrane are free of foreign substances, such as cerumen, desquamated epithelium, etc., and that the mixture be allowed to act for at least fifteen minutes, at which time we will find the drumhead dull white, and so insensitive that we may, except in the case of very young children, carry out the steps of the operation as precisely as though it were being done in the cadaver.

Restless, nervous children will require a general anæsthetic.

As to the operation itself, I believe it most important, first, that the incision shall be made very free, and secondly, that it be so placed as to secure beyond question thorough drainage without further interference for a considerable number of days.

To accomplish this I made a vertical cut through the m. t., from the upper to the lower edge in the posterior segment, and a second horizontal one running into the first from the front near the lower margin of the membrane, forming thus an L shaped flap. When the upper posterior wall of the canal is boggy and sagging, I prolong the vertical cut upward well into the lower end of the canal beyond the limit of the membrane. The ordinary vertical or crescentic incision, even though free, closes much sooner than the one just described.

After making sure that the drum is thus well opened, all discharge and blood clots are quickly removed with a clean cotton probe, and the canal filled with carbolized glycerine, 5 per cent., and not again interfered with for twelve to twenty-four hours, except to change, as it becomes moist, the iodoform or borated gauze which is to be kept constantly in the outer end of the canal and pinna.

Although I was formerly in the habit of syringing the canal after paracentesis, several times daily with warm bichloride, soda or borated water, I have lately, I think, had better results, unless the discharge is very profuse, from carefully wiping out the canal down to the membrane once daily and directing that in the interval

there be instilled 6-8 drops of the warmed 5 per cent. carbolized glycerine every 3 to 5 hours.

When, however, the patient cannot be seen frequently by the physician, I believe the syringe should be used 1-4 times daily, depending upon the amount of discharge. In my hands the old piston syringe has been entirely displaced by the safer, cleaner soft rubber ball to be found in every pharmacy. Those of white or gray rubber should not be used on account of the powder of Zinc and Sulphur which comes from the surface.

Black or red rubber may be boiled safely without doing it harm.

To hasten the emptying of the discharge from the drum, gentle Valsalvian or Politzer inflation may be practiced *so long as the opening in the drumhead is large*. If there be doubt as to this it is much better to dispense with such aid.

The greater my experience with these cases, the more I am inclined to the let alone plan of after treatment.

In certain cases of unruly children when each dressing has been attended by violent and exhausting struggles, I have abstained from further interference than the gentle wiping away of the discharge from the outer end of the canal, and the instillation of the carbolized glycerine, and the result has been satisfactory.

DISCUSSION.

Dr. W. W. Speakman: It is not too much to say that it would be fortunate if this paper could be read by every general practitioner in our school. I think often if men would come into the clinics, see a mastoid opened, see the magnitude of the operation, the necessary mutilation, the destruction of the parts, and realize that only too often the operation is necessary because a stitch had not been taken in time, they would not defer opening the drumhead. Some men defer opening the drumhead or opening the membrana tympani because they feel they must cut in certain exact lines. They read in text books they are to make their incision at such and such a point. Any of you who have looked in an inflamed ear know that the landmarks are lost in a severe attack of otitis media. At the further end of your speculum you find something that looks just like a red point, like a piece of raw beef. You have as a rule very little to guide you as to the exact place to work with the point of your knife. In some cases you have, but as a rule you have very little

to guide you. It does not make very much difference where you cut. It is not so important just where you put the point of the knife as that you do put it in the upper and posterior part, make an incision there, and put the point of the knife in until you feel the bone on the opposite side., sweep the knife to the bottom of the canal and then across. Some have said to me, "Will that incision heal?" The trouble is it heals too quickly, and frequently the drumhead has to be opened time and time again in order to complete and keep up sufficient drainage.

Dr. H. B. Ware: I wish to add one word here. I would like to ask Dr. Thomas if in the treatment of these cases the primary infection probably comes from nasal trouble and cold, when it is not traumatic, whether or not the nose is to be cleansed with antiseptic solution before the other means are applied. I would like to ask Dr. Thomas the proportions of the anæsthetic he mentions.

Dr. C. M. Thomas: The proportions are equal parts. As to the other point, I think I mentioned in the paper that the incision of the drum only comes in play in case treatment of the naso-pharynx fails to relieve.

Dr. H. B. Ware: I would like to tell Dr. Thomas why average practitioners, both in city and country, do not perform the operation often. It is because they lack the paraphernalia to do it with. We do not often have them. It is pretty hard to get into the ear with an ordinary knife.

Dr. H. K. Hoy: I would like to ask Dr. Thomas a question. He spoke of poultices and preparations put into the ear, and the liability to infection. I would like to ask him whether he would advise against the use of applications to the ear very early, that is, before the pus trouble has really set up.

Dr. C. M. Thomas: With reference to the first point, the lack of proper instruments, don't you think every practitioner should possess a suitable knife? Any small knife is proper. The instrument I use for doing this operation is a long, sharp, narrow knife with a short cutting edge. I think the difficulty probably lies in the fact that the general practitioner has not practiced inspection of the ear sufficiently. He is not able to see the bottom of the canal. It is difficult to make out the details of an inflamed membrana tympani, and it is not necessary. All that is necessary is that you shall be able to satisfy yourself that you are looking at the bottom of the canal, not at one side of the canal, at one of the walls. The canal is not perfectly straight,

and if you are not accustomed to the use of the speculum you may be directing it against one of the walls, and make your L shaped incision, and of course accomplish nothing. If you get to the bottom of the canal you can cut any way so that you cut freely. You may stir the thing up with the point of the knife after you cut. Make sure you make a free opening. That will all heal up in due course of time.

The other point that was mentioned about early application, I believe that early applications to these cases are most important, because by such an application we very commonly are able to abort the attack in the pre-exudative or early exudative stage, before the middle ear has become very much distended or the material in the cavity has become purulent. But, do not let us try to absorb all such exudations. Do not use instillations made of substances which may become putrescent, such as oils and poultices, but by something which will act as a painkiller and at the same time will help to bring about the absorption of the exudate, and so abort the case, so that it does not come to a necessity for incision. That material I believe should be something hot, clean, and, if possible, antiseptic, more than aseptic. Carbolic acid, fifty grains to the ounce, can do no harm. It does not cause pain but relieves pain. Over and over again I have seen pain relieved almost immediately as soon as the hot carbolic acid was instilled. I strongly advocate such an application as an abortive, but insist upon it that it be antiseptic.

A Member: Do you advocate inflation of the Eustachian tube during the early stages?

Dr. C. M. Thomas: In the very early stages, before there is exudate, I think it is a safe and very good practice, because at times what appears to be actual inflammation with pus exudate is not so. That is, the pain which the patient complains of is due to retraction of the drumhead as the result of rarification of air in the tympanic cavity through closure of the Eustachian tube. That condition at times will cause quite severe pain. I believe we are justified in that stage in opening the tube. We open the tube, pain ceases, and the case never goes on to inflammation. We know whether there is exudate by the condition of the drumhead. If it is flat or bulges it would be dangerous to inflate for fear of driving the material back into the mastoid cells, but when there is simply a closure of the Eustachian tube the drumhead is markedly de-

pressed, though very red and hyperæmic. Then I think it is perfectly safe.

A MEMBER: A number of times I have been called to children. I generally take my Politzer's bag with me, and have often relieved them.

DR. R. W. MCCLELLAND: While I believe it is correct and good practice, where it is possible, for the general practitioner to refer all cases of that kind that take on a threatening aspect to a specialist, it is not always possible to do this. I had a case recently that I attended and got a recovery, and this case illustrated the bad effects of the use of peroxide of hydrogen. I want to caution my brethren against the use of that preparation.

This was a case that came into my hands after being under the care of another physician for some time, and after spontaneous perforation of the drum. After this perforation had occurred, the physician recommended the constant instillation of the peroxide of hydrogen. The result was immediately to cause a great deal of pain. On that account he changed physicians. I found the treatment had forced the pus back into the tympanic cavity and threatened mastoid abscess. Finally it cleared up, but the effect was to caution me never to make use of that preparation.

REPORT OF THE

SECTION OF OBSTETRICS.

Criminal Abortion, by J. W. Dehoff, M. D.
Puerperal Convulsions, by S. G. A. Brown, M. D.
Puerperal Sepsis, by W. C. Mercer, M. D.

CRIMINAL ABORTION.

JOHN W. DEHOFF, M. D., YORK.

The disinclination to become mothers has led many married women to adopt measures not only to prevent conception, but to interrupt the fœtus in utero, by mechanical means or drug action administered with criminal intent. The motive leading to production of criminal abortion is evidently a diseased state of society, perverted knowledge of the true meaning and intent of conception and a failure to realize the duties of true womanhood, the perpetuation of the human family. Objection to maternity is an unhealthy sentiment pervading society, and endangering the foundation of morality. The habit is not confined to the uncultured or ignorant, but prevails among the educated and refined, who should, as a consequence of moral and intellectual training, realize the influence they possess to shape the destinies of nations.

Criminal abortion has become a question of momentous importance, and recognized by the moralist as a violation of law and order, positively destroying the order of well regulated society and undermining the health and happiness of a constituent part of human beings in every community. The solemn ties of marital life are frequently strained, creating a basis for the separation of husband and wife. It is not to be supposed that all women are afflicted with this disease, for many are not only willing, but anxious to accept the responsibility, with the assurance of receiving from future generations a crown of love more brilliant than any other the world can give. Pregnancy is an honorable condition, the foundation of the human race, and to be reverenced as a mother is a distinction worthy

of aspiration. The dawn of the first Christmas morning revered motherhood for all time, and if you and I were to paint a Madonna, none would be more beautiful and fair than the face of mother.

Criminal abortion is a fashionable mania pervading the minds of women who reject the honorable degree conferred by maternity. The mania is contracted by contact with people similarly afflicted, not infrequently a mother or supposed friend. It is, therefore, contagious and infectious, challenging both moral and statutory laws to prevent its ravages, the magnitude of which is not realized until it has destroyed the health of many a robust woman, and made her an invalid for all time. The great desire to be fashionable and relief from the responsibility of raising offspring, have the precedence to subsequent results. Legions of excuses are given to justify the criminal act, derived principally from false impressions received through evil association. The great desire for social pre-eminence, to conceal disgrace in the unmarried, false modesty, gossip of acquaintances, the failure of husbands to appreciate the responsibilities of motherhood, and the dread of passing down to posterity the contaminated blood of a syphilitic husband, are given with apparent vindication. Will any of these or other excuses justify premeditated malice? The destruction of the fœtus in utero is equally as malicious as would be the destruction of the child after birth. The former has a claim on life equal with the latter. The plea advanced that a fœtus is not viable prior to the period of quickening is impracticable. The moment the uterus is instinct with embryo life, and gestation has begun the child is viable, and subject to the law of development. It will have a constant and steady physiological growth, preserving the qualities and character derived from parentage, to be expended in subsequent life. The attempt to destroy embryonic or fœtal life may interfere with normal development and introduce to the world a being devoid of mental and physical powers. Parentage has a greater responsibility resting upon it than is usually understood. How many realize that the characteristics of the individual are formed during the intra-utero period. The offspring will inherit the temperament and predisposition of the mother. Then, if the mind of the mother is concentrated on the destruction of the child the impression received by the child, will inevitably influence its mental and physical development. Therefore, any person who will use instruments, drugs or other means with destructive intent, is guilty of arresting gestation, and pro-

ducing maternal conditions, which will positively be deleterious to the production of healthy progeny. Women who subject themselves to repeated abortions, with criminal intent, develop derangements of the pelvic organs, the substructure of chronic invalidism. Carelessness and negligence, in order to maintain secrecy, usually displace proper treatment. The recumbent position is not enforced. Nature is not given sufficient time to adjust itself, and subinvolution or displacement, will cause subsequent trouble. Profound anæmia, proceeding from hæmorrhage, consequent to retained portions of placenta, will reduce the vitality of the patient, and subject her to numerous nervous affections which a lifetime will not overcome. The chief danger, however, is sepsis, which may cause immediate death.

As a rule, the professional abortionist has no knowledge of antisepsis or the subsequent management of the case, and the after disregard of the dangers of the operation contribute to the gravity of the condition resulting from the operation. Again, the abortionist, to conceal his identity, will not continue the case, and the subsequent care and attention the patient should receive is entirely neglected, often ending in death, or leaving nervous and physical affections from which there is no relief. Many of the female patients under treatment in insane asylums are victims of criminal abortion. A case under observation terminated in this manner.

Another and a very serious question is worthy of consideration. If criminal abortion continues to increase, it will be a factor contributing to the degeneration of the American people, and the ascendency of an inferior race. This view may appear somewhat pessimistic but it is a fact, that inferior races are prolific and slowly but surely gaining, and may in time become the ruling power in this country. The responsibility rests not alone with woman. Man is equally guilty. If not so directly, he is so indirectly. As a rule, the professional abortionist is not a physician, but should a physician disgrace the profession by becoming an abortionist he is no longer worthy of the honors conferred by his Alma Mater. When the act has been committed by another, and the patient suffering as a consequence, then the physician can conscientiously render professional aid without incriminating himself; not, however, until he has received a statement, in the presence of a witness or in writing, exonerating him from criminal intent, and from any responsibility for conditions resulting therefrom.

To suppress criminal abortion would be a difficult task, beyond the control of the physician, and yet the profession should not remain silent. Medical science has made rapid progress toward the suppression of contagious and infectious diseases, and never again will a civilized city see what London saw in the great plague. Medical science stands at the door and bids pestilence defiance, and banishes from humanity ignorance and filth, the twin destroying angels, which shake down disease from their awful wings. The human race does not fully appreciate what it owes to medical science. It is not the cure, but the prevention of disease that has raised the standard of medical science. Epidemic diseases are held in abeyance, but criminal abortion, the greatest destroyer of life, is permitted to reap the harvest without molestation.

The Commonwealth appreciates the great work already accomplished by the medical profession, and bids us continue onward in our investigations until we have banished from the land the evil that is undermining the health of our noble women and destroying their progeny.

PUERPERAL CONVULSIONS.

S. G. A. BROWN, M. D., SHIPPENSBURG.

So little is comparatively known concerning the etiology of puerperal eclampsia that it is difficult to say anything definitely on that phase of the subject. Opinions and theories "change without notice," and the best we can say is that it is due to toxæmia. In an able paper presented before the New York County Homœopathic Medical Society (*North Amer. Jour. of Hom.*, Vol. LIII., pp. 452) several theories were brought forth.

Zangenmeister finds that the blood of the eclampsic woman shows no sign of the uræmic etiology of the convulsions, but that there are severe circulatory disturbances present with arterial spasm, . . . toxic irritation of the vasomotor centres being unproven.

Muller considers eclampsia the result of overwhelmingly rapid entrance of toxins into the circulation, which, in my humble opinion, is untenable. Albert argues that eclampsia is due to a latent microbe endometritis, another example of a good man gone astray.

Schmorl and others assert "that during pregnancy fragments of villi or syncytial cells escape into the maternal circulation, and that these foreign cells act as a poison to the system, for the neutralization of which an antitoxin is produced by the maternal tissues."

Weichardt argues that in the process of dissolution of the placental cells by the maternal antitoxin, a new toxin is set free, which, if not neutralized, will give rise to eclampsia, and this he calls syncytiotoxin."

J. C. Hirst asserts that the statement that 1 per cent. or less of urea is a danger signal is fallacious, and that it is albumen and not urea that is the index. Yet another recent writer declares that the albumen is only the symptom of a more deeply seated trouble. The presence of albumen naturally calls our attention to the serious gravity of the case, but it is yet to be proven that it is an etiological factor in the causation of the disease. One thing seems certain, the kidneys are not excreting the poison in sufficient quantity. This waste, effete material is retained in the blood, and becomes an irritant poison, and by its action on the vasomotors produces arterial spasm.

Other writers claim that the renal insufficiency is not the primary cause, but that defective hepatic activity is instrumental in bringing about the eclampsic state. This faulty metabolism, however, may have existed for quite a while. Yet another writer claims that the high tension pulse usually seen in connection with perverted kidney function is always associated with a defective action of the suprarenal glands. We are fully aware that even small doses of adrenalin are sufficient to cause a general contraction of the arteries, hence a disturbance of the suprarenal functions would naturally interfere with a free circulation of the blood through the kidneys, likewise would cause perverted liver activity, cardiac hypertrophy and the attending cerebral symptoms. We all meet cases of neuralgia, headache and undefined nervous symptoms, which are not relieved by the usual treatment. The urine may show no casts nor albumen. The urine is usually scanty in these cases. Urea and acid phosphates are always diminished, while uric acid may be in excess. These patients suffer much with headaches, and are more or less mentally despondent.

Eclampsia never comes on suddenly and without warning, a high authority to the contrary notwithstanding. Headache, backache, vertigo, constipation, insomnia, nosebleed, dyspnœa, scanty urine,

œdema of feet, ankles or face are all forerunners of some serious internal metabolic disturbance. True, the convulsions come on suddenly, but there are always premonitory symptoms. Unfortunately the physician is not always informed in the early stages. The disease pursues a rapid course, usually culminating in or near the full parturient term. One author claims that every attack is preceded by vomiting, a statement which I cannot corroborate in my limited experience of four cases.

Concerning the treatment authors differ. Preventive treatment is best. As this paper deals with eclampsia proper, however, we shall endeavor to speak only of the treatment to be employed during that inauspicious period. The spasms, which, when once seen, will never be forgotten, must be controlled. Chloroform inhalations are invaluable but not infallible. However, it should be used in all cases. Morphia in ¼ to ½ gr. doses, hypodermically, is also a useful adjunct, notwithstanding its depressing influence. Perhaps I hear some say this is not homœopathic; but I wish to state that we are dealing with a violent poison, and that while morphia has a tendency to check elimination, it likewise, through its action on the vasomotors, relaxes the spasm of the arteries.

Norwood's tincture of Veratrum viride, 15 to 20 gtts., hypodermically, is undoubtedly beneficial. Repeat every half hour. Cuprum ars., 2x, every half hour until relieved, should not be forgotten. Thyroid extract is valuable in threatened eclampsia because of its vaso-dilator propensities. It stimulates metabolism, and is a prompt eliminant, especially of urea. Glonoine I have used with eminent satisfaction. Give the 2x every half hour, carefully watching its effects. This being a dangerous, acute affection, dosage must be pushed. Pilocarpine, 1-24 gr., aqueous solution, may be given hypodermically, to induce diaphoresis and diuresis. Repeat every half hour until sweating occurs.

Transfusion of normal saline solution is one of the remedies *par excellence*. The chief precaution is surgical cleanliness. The best locations for the infusions are the loose tissues, especially those under the breast. Be sure all air has passed from the apparatus before inserting the needle. Some physicians advise the instillation of a few drops of cocaine, 2 per cent. solution, before the introduction of the needle, but this is wholly unnecessary, as the patient's intellect is usually already clouded. After the needle is inserted, raise the solution container high enough to cause an easy entrance

of the fluid into the tissues. Do not force the solution faster than absorption takes place. Distention of the tissues is unwarranted and dangerous. It is well to watch the temperature, and when it has fallen below 101° F., the transfusion may be dispensed with. After the withdrawal of the needle close the puncture with sterilized cotton and collodion.

Lumbar puncture for the relief of intracranial hypertension probably exerts a favorable influence on uræmic poisoning. I have tried it in but one case, so cannot speak with authority. The best authors recommend using a medium sized trocar of about 8 cm. in length, with a lumen of 1.5 mm. for the free flow of the cerebro-spinal fluid. Place your patient in the left lateral position, thighs flexed on abdomen, introduce trocar between 3d and 4th lumbar vertebræ. The instrument passes downward and slightly outward beside the spinous process, and as it enters the canal, the sensation to the touch is unmistakable. The fluid will spurt from the canal because of the internal pressure.

In conclusion, I would add that it is, of course, understood that should the convulsion appear before delivery, that should be accomplished as rapidly as possible with safety to the mother. As a general routine remedy during convalescence, nothing succeeds like Cuprum ars. 3x.

PUERPERAL SEPSIS.

WARREN C. MERCER, M. D., PHILADELPHIA.

Puerperal sepsis is a disease of the puerperium, with which most of us have had some experience that we dislike to have recalled. To my mind it is one of the most horrible conditions that can occur to the lying-in woman, after the amount of suffering she has gone through.

The disease is caused by the introduction of septic germs or their ptomains through the abrasions of the mucous membrane of the vagina, cervix or uterine cavity, they being deposited by the examining hand or instruments before, during or after labor. With the progress made in bacteriology and pathology to-day, we are in position to know that the disease is caused by a specific virus, and

that it must gain entrance to the genital tract by the above means, there being favorable conditions for its development.

If the above are absolute facts, and they must be judging from observations that have been made, and from our own personal experience, we must be impressed with the importance of treating our obstetrical cases as surgical ones.

It is known to be a fact that women who are pregnant or in the puerperium are more susceptible to certain diseases than those who are not. Then, why should they not be more susceptible to septic infection at this time?

We find the quality of the blood decreased in some cases, and in others there is an increase in white and red corpuscles. The quantity of the blood is increased, plus toxic products and waste material, which have to be eliminated. Besides, the patient loses more or less blood by hæmorrhage during parturition, which still further reduces her resisting power.

In reading over the literature of some of the old authorities on puerperal fever, one is amazed at the way the disease used to carry from patient to patient, and also at the mortality. These amazing conditions, it should be remarked, were in those days even more notable in the maternity hospitals than in private practice, whereas, at the present time, owing to the various improvements in the methods, etc., in maternities, the mortality from this dread disease averages much lower in the maternities than outside.

There are many varieties of puerperal sepsis, but I will confine myself in my further discussion to puerperal septicæmia. By the majority of physicians puerperal septicæmia is recognized by a chill and rise of temperature with rapid pulse and respiration, this condition developing a few days after delivery or following abortion, and continuing until death or recovery.

These symptoms occur in some when the secundines have been expelled complete, in others when incomplete. In the latter case the retained tissue forms a good hotbed for germ multiplication.

In the majority of cases there are chills, but they are never regular in occurrence. In fact, one case may have a chill the first day, and go on for several days without another, while another case may not have a chill until the disease is far advanced. Some have a chill nearly every day, and on the other hand in rare cases there are no chills at all.

The temperature variations may be sudden or there may be a gradual rise from 100° to 106.7° F.

Every physician should be suspicious of a rise of temperature during the puerperium, lest it be caused by toxæmia or sepsis, and should treat at once unless he has clearly marked indications that something else is the cause. A doctor ought not try to satisfy his conscience by attributing it to the common term "cold," which answers the question many times, when he does not care to find the cause.

Pulse is usually very rapid and weak, at first being full and bounding, the heart being extremely susceptible to the poison. The rapidity of the pulse is out of proportion to the rise of temperature.

The respiration depends on the amount of prostration and the condition of the heart.

There is some gastro-intestinal disturbance. Appetite is variable. At times there are nausea and vomiting, but these symptoms may not develop until the last stage.

The uterus and abdomen may be over-sensitive to pressure at any time.

One case I remember complained only of hunger, headache and weakness.

In the latter stages the bowels become loose, the patient is at times bathed in a profuse perspiration.

The lochia may be absent or very little disturbed. In the first stages there is usually an odor to the lochia, but septicæmia is not always indicated thereby, for such an odor is sometimes associated with sapræmia. In the later stages of septicæmia the odor disappears entirely. In fact, in quite a number of instances there is no odor at any stage, not even at the beginning. This is true in some of the most severe cases.

Uterine tenderness varies. Distention of the abdomen develops in the last stage of the disease. The uterus is usually large on account of involution taking place slowly, and the body is soft.

In some cases I found the following conditions: A diphtheroid exudate on the cervix and entire vaginal mucous membrane. It seemed to make no difference whether the membrane was injured or not. There were two cases of this kind, both recovering. Others had it only on cervix and abrasions of the vagina, and some had it on the cervix and cervical canal, which I could see by drawing the cervix down to the vulva. This exudate remained six to eight

days on the cases that recovered. The cervix in all cases was more or less patulous.

The initial chill and rise in temperature in many cases varied from three to ten days in developing. The earlier they began in the puerperium the more virulent they proved to be.

Diagnosis.—The diagnosis should be easily made. If the patient runs a temperature, we should look, first, to the breast; secondly, to the bowels, and lastly (after making sure there is no general disease) we should examine the discharges from the genital tract, bacteriologically.

Prognosis.—The prognosis is best answered by a question mark, at least for a few days. It is very hard to tell when one has the disease under control. If, by repeated blood examinations, we find an increase in the leucocytosis, the prognosis is more favorable than when there is a decrease in the leucocytes.

Treatment.—Prophylaxis, surgical, cleanliness on the part of all concerned, as few vaginal examinations as possible, douches before delivery only when one suspects infection of the genital tract. After delivery the patient should receive one vaginal douche each day. Creolin, 2 per cent.; Lysol, 1 to 1½ per cent., and Bichloride of mercury, 1:4000, are good antiseptics. I think the last named is the best.

We have the nurse use a Lysol solution to wash the external genitals each day (or as often as necessary), instead of plain water and soap. The Lysol solution is soapy and an antiseptic, so there is less chance of infecting the patient.

We have had fewer cases to run temperature and less odor to the lochia when each patient received one Bichloride douche daily. Many cases have developed odor to the lochia when they did not receive douches.

Remedies.—The following are some of the remedies highly recommended for puerperal sepsis: Arsenicum alb., Baptisia, Belladonna, China, Echinacea, Lachesis, Nux vom., Rhus tox., Secale cor., Graphites.

The following is the treatment we have used: China θ, three drops every three hours. Nuclein or Protonuclein, twenty to thirty drops three times a day, by hypodermic. Crede ointment rubbed into groin or axilla once a day. Good, nourishing liquid diet forced to the tolerance of the patient's stomach. Alcohol and Strychnia when the heart needed it.

Local Treatment.—Irrigate the vagina and uterus with an antiseptic solution, being sure that the instruments and vulva are clean. Curettement of the cavity of the uterus only when there are retained secundines, followed by an antiseptic, preferably Iodine (Churchill's solution), pure, over the entire cavity, as it penetrates the tissue.

I am convinced that intrauterine irrigation is not instituted early enough in some cases. In irrigation of the uterine cavity I have used the following: Bichloride of mercury, 1:4000; 95 per cent. alcohol and water, equal parts, with 2 to 4 drams of Iodine to the pint; Formalin, 10 drops to the pint. The temperature of these solutions should be 118° F. My preference is the Bichloride, and using it twice a day, without any sterile water following it. In some cases it was kept up for ten days, which is contrary to most authorities, and I could detect no ill effects either from the drug or from the omission of the sterile water. I have observed in some cases where the irrigation was discontinued after the first few days the temperature began to rise again. In one case we used the pure Iodine, having sterile water running through the vagina at the same time.

Bowels should be moved every day by enema if they are constipated in the early stages. We used a saline solution in the bowel as a stimulant, and flushed the bowel with the same solution before administering a nutrient enema when the stomach would not tolerate the diet.

I have only had experience with the serum-therapy in one case. In this instance, after a few days, pulse became softer, the temperature began to rise without intermission, the patient having three or four chills in twenty-four hours. The serum was discontinued, and the temperature gradually dropped to normal.

After going over the various methods of treatment, and considering the uncertainty of the results, I am impressed that we should be thorough in our antiseptic care of an obstetrical case. I am thoroughly convinced that the only sure way to cure this disease is by not having it develop. That means, to sum it up in a few words, surgical cleanliness. The old proverb, "Cleanliness is next to godliness," is a sentiment to be borne in mind constantly by the medical man as well as the moralist, and in no cases, it seems to me, should it be more distinctly remembered than in those of which I speak.

DISCUSSION.

Dr. M. M. Fleagle: A subject of the importance of this one I think should be rather thoroughly discussed, although the time is short. In order to treat this trouble successfully we want to get ahead of it in the first twenty-four hours. If we do not we are going to have trouble and plenty of it. I want simply to mention one remedy which is not mentioned in the paper, which I believe will come to the front in the treatment of puerperal septicæmia. That remedy is Pyrogen, a first-class remedy. The indications, in short, are these separations of temperature. Whenever the temperature is out of proportion to the pulse rate Pyrogen is useful. That is one of its typical indications. Another indication is profuse sweating. Pyrogen has also the restlessness of Rhus tox and the soreness of Arnica. When you find a patient with true puerperal sepsis you will find those conditions present. If you prescribe Pyrogen in ordinary potency you will get good results.

Dr. J. M. Heimbach: About two years ago I met a very difficult case of fever in a severe case of labor, in which I had to use instruments. I could not budge it with the instruments at all. I performed version, then applied the instrument and delivered the child with complete laceration. I sewed up the perineum, but the tissues were so lacerated that my stitches practically tore through, but I took deeper stitches and finally retained it, but had only a partial result. Although I got partial action of the sphincter, the outward appearance did not look as well as the inward appearance, but about ten days later after my patient had recovered from the immediate danger she got a very high temperature in less than twelve hours' time. I feared spasm, of course, from the severe lacerations. I made an ocular inspection, but found everything neat and clean, no congestion of the os whatever, and I commenced to look around for other conditions, but I positively could not find any pathological condition. Yet my patient would have chills and the temperature would go as high 105°. I prescribed remedies, such as Aconite, Bryonia and Arsenicum with no results, so one night things got very desperate. The family looked for a consultation. Being almost positive that I had no pathological lesion, I tried to detain consultation, particularly because I had no Homœopath to consult with. So I asked the family to wait until morning at least. Without the mother of the patient knowing it the husband came to me about 11 o'clock at

night, when she got very bad again. I stayed with my patient about half an hour, watched the symptoms very closely, and I concluded Sulphur must be indicated. I gave her one dose of Sulphur and in five minutes' time I was very agreeably surprised in the temperature dropping, my patient getting quiet, and getting a little bit drowsy, and finally she dropped off to sleep. Next day her temperature had dropped about three degrees, and she held that morning temperature during the day. The following day it dropped another degree and held it for that day, and the third day the temperature was entirely normal. I do not believe there was any septic condition in the case whatsoever. The only conclusion I could possibly reach was from the effect of the Sulphur starting up a belching of gas in about fifteen minutes after the first dose was administered, and probably relieving some pressure on the solar plexus. If anybody can give me an explanation of that course of temperature I would be glad to receive it.

Dr. T. L. Chase: I was somewhat surprised to hear Dr. Mercer advise the giving of vaginal douches as a routine remedy after confinement. When that course was first inaugurated I tried it in a large number of cases and found very few subjected to this treatment that would go through a normal puerperium; all without exception running a temperature of between 99.5° to 100.5°F. Later, in view of this experience, I stopped the routine use of douches, excepting, of course, in the presence of septic infection, whereupon the cases ran a normal course with no elevation of temperature.

In general practice where every care is taken during delivery patients recover better without douches than with them, because there are thrown out in the vagina and such parts as can be reached with the douche normal secretions which are inimical to infective micro-organisms. When these secretions are washed away you destroy that protective covering and render your patient more liable to infection.

A point regarding Dr. Mercer's treatment: If, according to his statement, the pregnant woman is sometimes more open to infection than the non-pregnant woman, still in other respects she is normal. In the first place we must remember that during the course of pregnancy the woman's blood becomes markedly hydræmic and an increase in the relative number of leucocytes occurs; so that if frequent, careful examination of her urine during pregnancy shows a normal

excretion of urea, the prospective parturient is less likely to become infected than the non-pregnant woman. In the saphrophytic infections mentioned the lochia is always offensive and these cases should receive early intra-uterine irrigation; always preceded by a curettement, if there is anything to remove from the uterus.

Regarding the case the doctor has just mentioned. We know that the most virulent infections that occur following labor are those of the streptococcic variety, where there is no lesion perceptible until very late in the course of the disease. This form of infection is most dangerous, because it enters directly through the uterine walls, is taken up by the lymphatics and blood current and practically overwhelms the patient.

Dr. W. F. Edmundson: I think Dr. Mercer has brought out in his paper very clearly a keynote in the practice of the obstetrical art, that is, the point of cleanliness. I think the physician who goes to a case and by his own acts of uncleanliness, either by hands, clothing or in whatever way he may, infects the patient, is criminal, and in these days he should be punished for it. I have had some little experience in the practice of obstetrics in a very prolific portion of the city of Pittsburg, and to my mind there are some things that cannot be explained altogether on the basis of uncleanliness. How often do we find a case where we have a trained nurse, everything under the most favorable auspices, and that case becomes infected and perhaps dies; whereas we have another case in a poor family, possibly living in two rooms, seven or eight people crowded in two rooms, no care taken of the patient whatever, the mother perhaps not washed from the time the child is born until she rises from the bed and performs the ablution herself, and that patient will not have any trouble at all. I think we forget that in the higher social circles of life the majority of women have not that resistance to poison that we find in the stronger and more immune women that we meet in the lower circles. That is the only way I can explain it. With the doctor who has just spoken I do not believe in the constant and invariable use of the douche in labor or after confinement. I do believe it is called for in a good many cases where we have the initial symptoms of a coming storm, indicated perhaps by a rise of fever that cannot be explained upon any ground. Very often we have these obscure cases of fever, where a case will run for weeks without any apparent trouble in the abdominal cavity, no pain, no tympanitis, nothing that will indicate the localization of any poison

or any apparent indication of septic invasion. That can be explained in a good many cases, especially in young, unmarried women, as coming from their mental condition. I have known of a number of cases that came into our hospital that could be explained upon no other ground than that this fever was fed and kept up by the action of the mind upon the nervous system. I have studied such cases repeatedly, and could explain it on no other ground.

In regard to the douche, I invariably wait until I have what I would call the initial stage of poisoning. Every chill we have in confinement is not due to septic poison. Every rise of temperature is not due to the same cause. We may have a deep-seated abscess forming in the breast, down next to the ribs, and that may set up fever and may cause a chill. There may be an overloaded intestinal tract, which sometimes will bring on a rise of temperature and sometimes produce a chill, and that canal should be cleaned out. I do not believe in doing this in a half-hearted way. I believe in giving them a good, old-fashioned dose of castor oil to cleanse the alimentary tract from the stomach down. In a practice extending over some thirty odd years I have had the misfortune to lose two cases of confinement, and three cases following abortion or miscarriage. I have had some pretty hard fights, and when I first started out, if I had known as much as I do now, if we had been as far along in the obstetrical art as we are to-day, when we had a case of miscarriage and when it was beyond the hope of remedies or any remedial agent whatever, we would immediately have cleaned out the uterus, washed it carefuly, packed it and gone on about our business. In twenty-four, thirty-six or forty-eight hours there would have been an end of the trouble. I do not think the younger men of to-day have half the trouble to practice obstetrics or any branch of medicine that we who commenced earlier had. Very often we have cases where the laceration and destruction and bruising of the parts is very severe. Sometimes, in order to save labor to the mother, we have to do extreme things; we have to do things perhaps that look a little like brutality, but they have to be done. It is a moot point I believe by gynæcologists, men who make these things a study, as to the best time to operate for lacerated cervix. To my mind it is all nonsense to subject a woman, where the destruction is great, where the parts as a rule are greatly bruised, to the additional trouble of repairing the cervix at the time of labor. If the destruction is great, I will not. If it is not, I repair it at

the time. I think from experience in former years I have saved the patient considerable suffering and myself considerable trouble and worry by letting it alone. In obstetrical work especially, we should be exceedingly careful how we mix surgery and obstetrics together. In our hospital in Pittsburg we are unfortunately situated in having our obstetrical ward in connection with the hospital. I do not think that ought to be allowed. I have felt convinced of that, because we have men on that staff who are inteligent, capable, careful, painstaking men, who take pride in their work and do it carefully and well and watch every point, and yet we sometimes have septicæmia or puerperal fever. With all the imperfection in the treatment of obstetric cases prior to my connection with the hospital I never had very much trouble. I might have a slight rise in temperature, but never had a single case that I lost. I feel now that we get trouble from the surgical ward in the hospital. Therefore, I think the two classes of cases should be entirely separated one from the other.

DR. H. K. HOY: Twenty-five years ago, when I was attending college, we heard a lot about Listerism. That was nearly all we heard on the subject of antisepsis, so I commenced to treat labor cases not as those who graduate at the present time do, but my success has been such as to be eminently satisfactory to me. I have not been in the habit and do not now take the care that the young practitioner does. A few things I have learned I am not ashamed to state. One is on the subject of douches. I am no great friend to douching in obstetrical practice. The parturient canal is naturally a self-cleansing canal. When I do douche it is in those cases where I do it for the purpose of doing work that has been made necessary for repairing the lacerated perineum. Outside of that I never douche after labor, except when an occasion arises which positively requires it.

One thing I have learned is this. By some it may not be considered true Homœopathy, but I believe it is. I believe if there is anything in Homœopathy that will carry itself through on its own merits it is this, prevention is better than cure. You can prevent a whole lot of trouble if you will give after a confinement case a remedy like Ferr. phos. Whatever else I may be called upon to give after a case of confinement, I never forget to give Ferrum phos. about every second or every fourth hour, and since I do that I rarely have any appreciable cases of fever following. Very often

my patients get through without even a rise of temperature when the milk is established. I have demonstrated to my own satisfaction that this is such a useful remedy that I now give it as a matter of routine. Whatever else I may give, I give that along with it, but in alternation, or perhaps a dose of that to two or three doses of the other remedy, if I give another remedy.

Dr. W. F. Edmundson: I would like to ask the doctor why he would give any remedy if everything is normal and the patient doing well?

Dr. H. K. Hoy: You know in nearly all cases there are after pains.

Dr. Edmundson: You give it for after pains?

Dr. Hoy: I give a remedy for after pains, but whether I would give another remedy or not, I would give Ferrum phos.

Dr. Edmundson: Don't you think there would not be any rise in temperature in a large number of cases if you would immediately unload the intestinal tract? There would not even be a rise in temperature with the milk.

Dr. Hoy: I do not know about that. I always like to have the intestinal tract unloaded before we have delivery.

Dr. Edmundson: You cannot always do that.

Dr. Hoy: I know we cannot always do it, but try to have that done. I also do not believe in waiting too long after confinement for an evacuation of the bowels.

Dr. Edmundson: I have been called in consultation sometimes in these cases where there was a rise in temperature persisting for days, and have been astonished to find that the patient had not had a normal evacuation of the bowels for maybe six or seven and sometimes ten or twelve days. I have seen inside of four or five hours patients with a temperature of 104 degrees, restless, tossing, troubled in body and mind, relieved entirely by an evacuation of the bowels. I believe if any remedy is called for in a case of labor that remedy is Arnica, given in low potency. I have watched Arnica for a long time, not because I thought there was usually any remedy required, but because I wanted to find out whether a certain number of cases receiving Arnica would do any better after confinement than a certain number of cases, as nearly similar as I could get them, would do without it. I must confess I have not seen very much difference, but I do believe that where we get the symptoms calling for it we can do a great deal with the indicated remedy in all these cases.

Dr. Hoy: In regard to the remedy, Arnica, I have had some experience with it, and believe that if Arnica is rightly administered it will soothe the after pains in many cases. Where there are after pains I should rely on Arnica in combination with Ferrum phos., giving doses alternately about every two hours, with an instruction that if the after pains persist, to give a few doses of Arnica closer together. I have often found where Arnica is repeated in this way that it soothes the after pains very nicely, and if there is any such thing as a routine practice that I would advise, it would be this; but I have found myself baffled sometimes with Arnica, about one case out of twenty where Arnica did not seem to do the work nicely, but in about nineteen cases out of twenty I believe it will.

Dr. W. C. Mercer: Dr. Snader asked about toxæmia. There is toxæmia when puerperal convulsions occur; that is, where there is absorption of septic material, or material produced by the germs, the bacteria at the same time being absorbed. Sepsis is a general term that covers the whole condition. In septicæmia you have blood changes, and you find bacteria in the blood. There will be an increase or a decrease in the white corpuscles. It depends on whether the patient is able to react enough to overcome the poison. Sapræmia develops where membranes or part the placenta have been retained, and, becoming infected; it develops, and septicæmia can go on and develop from that.

As far as my experience goes, I have not seen very good results from remedies. I depend more on building up the patient as much as possible and aiding nature to overcome the poison.

As to douches after labor. Douche once a day. It was only in infected cases where I gave douches more than once a day, whether there is laceration or not. Some say that by douching you wash away the protective condition that is formed by the leucocytes. I know from experience of cases delivered in the hospital. For a long time we never gave a douche to any patient. The consequence was on going into the ward in the morning an odor was noticeable. You could not help but detect it. If you examined each patient you detected the odor. Some of those patients had a rise of temperature and some had not. I think frequently when the temperature is taken by a practitioner outside it is taken once a day, possibly in the morning. There may not be any rise of temperature at that time. If you take it four times in twenty-four hours you may find a rise which the general practitioner would not observe. I think douching once

a day if it does wash away the protection thrown out by the leucocytes they can form again, but you certainly wash away any septic material.

Dr. W. F. Edmundson: An odor is always due to a pathological condition. If you have no change in the lochia and no rise in temperature, then I claim the douche is uncalled for, especially in practice in the lower circles of society, because how many can give these douches without doing more harm than good? They carry lochia that may be in the external parts into deeper structures with the douche. That is very poisonous. They may do the very thing they do not want to do.

REPORT OF THE

SECTION OF GYNÆCOLOGY.

Some Recent Advances in Gynecic Surgery, by T. L. Chase, M. D.
Indications for the Surgical Treatment of Fibroid Tumors of the Uterus, by B. F. Betts, M. D
The Pathology of Tuberculosis of the Female Genitalia, by N. S. Betts, M. D.
Extra-Uterine Pregnancy, by W. D. Culin, M. D.
Ether's Effects in Abdominal and Pelvic Surgery, by P. F. Felsberg, M. D.
Ectopic Pregnancy, by H. M. Gay, M. D.
Report of Three Cases of Cæsarian Section by T. J. Gramm, M. D.
The Homœopathic Remedy in Gynæcological Cases, by D. C. Kline, M. D.
Cancer of the Uterus, by N. F. Lane, M. D.
Mammary Tumors Under Medical Treatment, by Julia C. Loos, M. D.
Incomplete Abortion, by E. H. Van Deusen, M. D.
Contra-Indications for the Use of the Curette, by A. W. Yale, M. D.

SOME RECENT ADVANCES IN GYNECIC SURGERY.

THEODORE L. CHASE, M. D., PHILADELPHIA.

If we compare the literature of the past with that of present day teaching, we are convinced that there is no branch of surgical progress which has outdistanced that developed within the abdominal cavity. In selecting this subject for consideration, we are aware that modern operative technic, although vastly superior to that of the past, is still far from perfect. That in many instances present methods will become superseded by a progressively improved technic, which will still further reduce the present low mortality rate, and that the necessity for early surgical interference in the treatment of intra-abdominal disease will become more clearly recognized, are facts which force themselves upon the student of modern surgery.

Another fact which cannot be overlooked in the ever changing realm of the specialties in surgery is the steadily widening path of the gynæcologist. This condition has, of necessity, arisen from the

inevitable need of an equipment sufficient to cope with the coexistent complications which are revealed in the vast majority of cases looking to the gynæcean for relief and cure. Since the primal instinct of the human race is the preservation of their species, of what avail is the knowledge of the healing art developed through ages and intrusted at last to contemporary medical men, when, if for a prescribed pelvic lesion, diagnosis and operative measures, primarily resorted to for the cure of that lesion, disclose in some other area of the abdominal cavity lesions, the interrupted development of which means death, or at best the additional risk of later surgical interference, perhaps under far less favorable auspices. Latter day practitioners demand a broader equipment in the gynecic surgeon. They expect that one capable of treating lesions of the female bladder shall be prepared to repair the diseased ureter, and, if necessary, the kidney itself. Likewise they require that the treatment of right adnexal disease shall include the successful removal of a diseased appendix, and further, if a lesion in this locality is associated with inflammation of the gall bladder, bile ducts, duodenum, pancreas, or stomach, these shall receive proper surgical treatment; thus has the field of gynæcology come to imply familiarity with all of the various pathological processes discoverable, when, for any cause, the abdominal cavity is opened.

In following the trend of surgical treatment of lesions contained within the abdominal cavity we realize that we are fast leaving the paths traveled by the Germans. Their strenuous desire to develop the science of pathology has given us a vast store of material upon this branch of medical science; but the curative treatment which has developed from this study of pathology has been disproportionately meagre. The medical world at the present time requires all this knowledge of pathology balanced by an equal progress in investigations devoted to the treatment of diseases.

Pathology has taught us much concerning the bacteria involving the intestinal tract, their mode of entrance, and their deleterious effects upon certain areas of organs contained within the abdominal cavity; also we must acknowledge the importance of research applied to new growths and their various degenerations. Diseases of the stomach, gall bladder, intestines, kidney, ureter, and the pelvic organs have been more closely studied, while the progress made in the study of embryology and physiology warrants our closest attention.

We are often compelled to seek an explanation of disease of the vital organs contained within the abdominal cavity from the very changes which occur in the evolution of these organs from the earliest formative period "in utero" to adolescence. The study of embryology has given us an insight into the causes of defects of development by establishing their congenital origin and by referring partial development and displacement of abdominal organs to the fœtal stage.

Along physiologic lines we find the interesting experiments of Knauer. When, in transplanting the ovaries of rabbits and dogs into the fascia of the abdominal wall and mesometrium, such transplantation was fertile, atrophy of the breasts and genitalia did not occur; but where the transplanted ovaries atrophied and disappeared, all the changes incident to a complete menopause were found present. This demonstrates the dominant function of ovarian tissue, and when we recognize that in the normal function of the ovary we have the element which secures the normal development and preservation of the female generative organs, we can appreciate the importance of any etiological factors which may interfere with or alter their functional activity. Of late, we have had brought to our attention the fact that defective function on the part of the ovary is a frequent cause of dysmenorrhœa; thus we are profoundly impressed when retrospection brings to our minds past failures in the treatment of this disease, wherein the negative results were often due to the popular belief that the endometrium and cervical canal were the sole cause of the dysmenorrhœa. Many cases of this disease which fail to respond to treatment directed to the uterus we now find curative when the abdomen is opened and surgical treatment directed to the ovary. The removal of adhesions and the thick, almost capsular covering of the ovary permit resumption of the normal physiologic function of this organ, thereby relieving the dysmenorrhœa. Many of these conditions are due to congenital changes in the ovary; on the other hand, many are acquired, and in the latter, successful results are obtained by these methods.

We must also consider the derangement of ovarian function in its relation to abnormalities developing during the menopause. We are aware that ovarian secretion is essential to a proper balance in the nervous system. Ovarian secretion produces the periodic pelvic congestion during the active period of life. Thyroid secretion promotes anæmia of the pelvic organs, and in this way we have an

antagonism in the action of the secretion of these two organs. We have, as example, deficiency of thyroid secretion producing myxœdema, whereas a hyper-secretion of the thyroid gland develops Basedow's disease. Where we have defective ovarian secretion, we often note an increase in the thyroid secretion, resulting in many of the symptoms of Basedow's disease, without the exophthalmos and goitre.

In considering diseases having their origin in the pelvis of the female, we must note the innumerable instances of the various forms of gonorrhœal infection, and the resulting diseases, salpingitis, pelvic peritonitis (existing as a chronic form except following abortion or labor), and the dire sequelæ of an adhesive peritonitis, parametritis and sterility. These are the cases which furnish the extensive field for the practice of conservative surgery in the pelvis. (Article by the author on Diseases of the Fallopian Tubes, read at the Pennsylvania State Society, September, 1904.)

We have recognized the important role that pregnancy and labor bear in relation to the future well-being of the woman, and with a clearer comprehension of these conditions and their results has developed a more cautious and conservative diagnosis, due to an accurate appreciation of the limitations as well as the extent of the abnormalities associated with the reproductive function; thus, the one time popular reference of all gynæcological conditions to lacerations and uterine displacements is no longer tolerated. Gynæcology has taught the practitioner that post partum treatment properly includes complete restoration to the normal state, locally as well as systemically. Just here I may mention that successful treatment of these cases lies in the logical and in obstinate cases, persistent application of well-worn measures (tampons, douches, pessaries, etc.). Hydrotherapy, massage and regulated exercises have also entered the gynæcologic field with undisputed success as accessories to more specific measures.

In considering gynæcologic surgery the modifications and adaptations of surgical procedures are too numerous to receive more than a general resume. In colporrhaphy for cystocele, the prolapsed bladder is now frequently sewn fast to the uterus or broad ligaments, or supported by the uterus by vagino-fixation. In operations for the removal of fibromyomata of the uterus conservatism is no longer the exception, exsection of involved portions of the organ only, has replaced the radical hysterectomy, save when the

latter method is the only means of relief; thus is the reproductive function maintained to individuals still in the child-bearing period. With these exceptions, however, large or rapidly growing fibroids are to be regarded as a constant source of danger. (See article on Uterine Fibromyomata, read by the author before the Pennsylvania State Society, September, 1903.)

Another important advance is the more cautious employment of the curette. Inflammatory conditions of the uterus now prohibit the use of this instrument, since it is a well known fact that inflammation of the tubes, ovaries, and even the peritoneum are possible through this source. Hysterectomy for certain forms of post partum infection has been tried with varying success.

In inflammatory conditions of the pelvis such as salpingitis, oophoritis, salpingo-oophoritis, etc., the localized peritonitis which follows, and the varicose conditions of the broad ligaments, which almost eludes the examining fingers, are often the chief sources of suffering and sterility. In these cases careful examination often reveals a prolapsed ovary, perhaps bound down by adhesions. Operation (justifiable for sterility in these cases) discloses the delicate adhesions closing the distal end of the tube, fixing the ovary in Douglas's cul-de-sac, and effectually preventing the entrance of ova into the tube. Cystic degeneration of the ovary is frequently associated. Neither the presence nor absence of pain in these cases can be relied upon as diagnostic features, since peritoneal sensitiveness varies with each individual. Certain etiologic factors bear an important rôle in these lesions, e. g., diseases of childhood, tuberculosis, puerperal infection and gonorrhœa. The predominance of lesions in the right side over those in the left is deducible from the location of the appendix in the right side; this is easily understood when we consider that a diseased appendix with a varying degree of peritoneal irritation and exudation can the more readily transmit infection to the tube by the attraction of the waving tubal cilia, which convey the bacteria to the interior of the tube. Delicate adhesions are the mildest sequelæ of such an invasion. (See article by author on Gynæcologic Cases Associated With Appendicular Disease, read before the American Institute of Homœopathy, Boston, September, 1903.)

In operations for sterility conservative measures are essential, only that which is pathological being removed. Adhesions are freed, and as much of the tube as is diseased removed, the abdominal

ostia of the remainder made patent, the blood supply secured, and the healthy portion of the ovary sutured where adhesions cannot recur. The pelvic ligaments are shortened, thereby fixing the uterus in its normal position, and lastly, the appendix is removed. These cases should be most carefully selected, only those in which all inflamed areas can be removed proving permanently successful.

Diseases of the urinary system are receiving their due share of attention in modern surgery. Irritable bladder, cystitis and the dire results of bacterial invasion (often from the genital tract) are no longer left to the uncertain relief of medical treatment, since we comprehend the dangers from an upward invasion into the ureter, finally resulting in lesions of the kidney.

These remarks are in no wise intended as a detalied review of the triumphant progress and abdominal surgery, such a history lies without the scope of this address which is limited to a brief presentation of a few of the more important advances in which we are all interested.

INDICATIONS FOR THE SURGICAL TREATMENT OF FIBROID TUMORS OF THE UTERUS.

E. FRANK BETTS, M. D., PHILADELPHIA.

The estimate of Klobs that nearly 50 per cent. of women who have reached the age of fifty show evidences of the presence of fibroid tumors of the uterus, if subjected to post mortem examinations, is generally conceded to be too high

From the records of the last 1,000 patients examined in private practice I found 134 suffered from the presence of these growths to an extent sufficient to require treatment.

In my hospital service a greater proportion are operated, as they come to the institutions for that specific purpose. Many small growths produce no symptoms, and are entirely unrecognized by the general practitioner. My records are compiled from cases mostly sent for diagnosis and treatment in consultation, and belong strictly to the class known as gynæcological.

Whilst many growths of this character produce but few palpable evidences of their presence, they often become complicating factors

later in the history of the case, and require consideration on that account. When the tumors are so small as to produce no symptoms, patients are not informed of their presence, because of the mental effect that might be produced, but some judicious friend is informed with the object of securing such supervision of the case as may be necessary for the patient's welfare in the future.

Of the 134 cases referred to, eighty-one needed prompt attention by surgical treatment, and forty-nine were less urgent. Pregnancy was a complication in four additional instances, and two of these required prompt surgical intervention for the relief of excessive pain, hæmorrhages or dangerous symptoms due to mechanical causes. Two others were allowed to go to full term because of a more favorable location of the growth near the fundus, and in both instances the tumors disappeared after parturition, during the nursing period.

There were undoubtedly in the 1,000 cases many patients examined who had tumors too small to be taken into account, or so located as to be overlooked. The statement of that eminent American authority (Dr. Howard Kelly), that a great majority of myomatous uteri require no treatment, has, however, not been corroborated by my experience. The conditions which have required surgical treatment most frequently are pain, peritoneal irritation and inflammation from the development of the subserous variety, hæmorrhage and conditions complicating gestation from the submucous variety, and both of these sequences from the interstitial form.

Hæmorrhage has been kept in subjection in many instances by Sabina 3x, Ipecac 30, Belladonna 30, China 3x, Trillium pendulum 3x, and Nux vomica 30, in the order mentioned. Hot vinegar and water compresses have been frequently used when the flow became excessive. They are applied to the uterine region externally, above the symphysis. Vaginal or utero-vaginal tampons have sometimes been employed. Pain and symptoms of inflammation have been satisfactorily controlled by Bryonia 30, or Belladonna 30, with the unloading of the bowels and recumbency.

But hæmorrhage if persisted leads to the more serious consequences involving the heart, kidneys or liver in many instances.

The approved methods of electrical treatment (for controlling hæmorrhage) were formerly used, but have long been discontinued.

Curettage has been resorted to with apparent temporary relief of

hæmorrhage in many cases, but is recognized as a surgical measure frought with considerable danger in many instances.

The danger is increased in those in whom a submucous bleeding fibroid renders the uterine canal so tortuous as to prevent complete curettement of all the mucous surfaces covering the protruding mass. To thoroughly curette a portion of the endometrium when septic matter is lodged in inaccessible spaces higher up exposes a raw surface to serious septic influences. Sloughing, partial disintegration and inflammation are conditions to be guarded against.

Whilst in a general way the bleeding is in proportion to the proximity of the tumor to the endometrium, pressure atrophy may exist in some cases in which the bleeding is profuse, and for this condition curettage will be of little benefit, because one or more large vessels are bleeding rather than the whole mucous surface. A small tumor may bleed more copiously than a large one, and be entirely unaffected by curettement. When the cervix is encroached upon by the tumor, so that it is not freely dilatable, curettage is contra-indicated. For the curettement of a myomatous uterus should be preceded by a thorough dilation of the cervix, then a prolonged effort to sterilize the cavity by irrigation, then the exploring sound or small curette should be introduced, so as to determine the length and the conformation of the canal. When the canal is so distorted that neither the sound nor curette can be passed into all parts of the cavity, curettage had best be dispensed with. Thorough irrigation with the Bichloride solution is an efficient substitute.

The removal of a single growth lodged low in the cervix by morcillation or the removal of multiple growths by hysterectomy is the best procedure in my experience.

A patient suffering from metrorrhagia while still a young woman was curetted for the first time twenty years ago when medicine failed to accomplish the desired results. For a time the menses became regular, and she afterward married. Although well developed in every way and a picture of perfect womanhood, subsequent curettements became necessary, and at shorter intervals, and she remained sterile. After an absence of several years she consulted me again, last January, on account of a most offensive and frequently recurring menstruation, which amounted to metrorrhagia without periodicity. Pregnancy and the retention of the products of an interrupted gestation could be excluded. The resort to curettement was believed to be more dangerous, from an increase of

the general septic condition, than abdominal hysterectomy, yet as the patient refused the latter treatment at this time, uterine irrigation with the Bichloride solution was attempted through a patulous cervix. This resulted in the immediate onset of a perfect flood of blood, which had such a marked effect upon the pulse and general appearance of the patient, as to convince me of the futility of all such efforts. Tamponment, recumbency and treatment intended to increase the hæmoglobin and red blood cell count, as well as to improve the heart's action by saline infusion and good nursing for one week, secured all that was possible before an abdominal section. As the patient was not in a condition to be brought to the hospital from her suburban home, I was obliged to operate with the following unfavorable conditions confronting her: Increasing septic infection with elevation of temperature, nephritis with albumen in the urine, degenerated heart muscle, impaired digestion, assimilation and hydræmia. All of which I attribute directly to the long-standing fibromyomatous condition of the uterus. With all the precautions observed during the operation, we had, subsequently, considerable heart failure, with renal insufficiency, defective assimilation, hyperemesis, and finally, pleuritic effusion in both thoracic cavities, which impaired respiration and interferred with sleep, but slowly yielded to the administration of Byronia, until complete restoration was effected.

Furthermore, a microscopic examination of the sloughing mass removed from the uterine cavity after the hysterectomy, gave evidences of malignant changes. So that we not only had conditions developed from the persistent septic infection of the case, which were decidedly dangerous in themselves, but also a probable tendency toward malignancy.

Prof. Kelly's statement that no surgical treatment should be attempted when such complications exist, as advanced nephritis, double hydronephrosis, or persistent glycosuria, is fully endorsed. It is then too late to operate if these conditions are serious. My contention is for an earlier operation which precedes these conditions. In such few cases as can be relieved of these complications by recumbency, elevation of the mass in the knee-chest position, and packing the vagina with woolen tampons, the surgical treatment may be deferred. A frequent recurrence of impaction with pressure symptoms will call for prompt operative treatment, but with abdominal hysterectomy, all the additional risk referred to above

taken into consideration. Adhesions preventing the relief of impaction, will call for an operation as may be determined by placing the patient under the influence of ether for the examination, when the above complications are not present

It has been said that the subperitoneal form of myomia does not usually call for surgical interference, if the tumor does not grow rapidly, if it is not attended with attacks of peritonitis, if it has developed in the upper half of the uterus, and does not lead to uterine flexion and other displacement of the pelvic organs, or to impaction below the sacral promontory. Conversely, the necessity for surgical interference is apparent, but while the treatment of impaction with the patient in the knee-chest position and the cervix drawn upon by the tenaculum may sometimes liberate the mass from the true pelvis, and delay from a consideration of the abovementioned favorable conditions may be decided upon. Valuable time may be lost and the degenerative changes which increase the fatality after operation are likely to ensue under conditions heretofore considered favorable. Pedunculated tumors of the subserous variety are not as innocent as we might infer, especially when the stem of attachment is long and thin, for torsion may cut off the blood supply to the tumor and lead to necrosis. Looping of the intestine may cause obstruction of the bowels.

The submucous variety with repeated hæmorrhage would seem to me to require the most prompt treatment by the radical operation. The inefficiency of curettement in some of these cases has been dwelt upon. It is now necessary to mention specifically some of the degenerative changes which ensue in many instances. While the frequency with which these changes occur may be open to discussion, the likelihood of such occurrences must always be kept in mind. The most important local changes are softening, œdematous enlargement, calcification, suppuration and malignant degeneration.

Martin reported 205 cases in whom there were ten suppurating fibroids, eleven œdematous, three telangiectatic, six sarcomatous degenerations.

Eastman reported statistics, compiled from 169 cases, operated by himself, as follows:

One suppurative fibroid, ten necrobiotic, four telangiectatic, seven cystic, two calcareous, three myxomatous, three adenoma carcinomatous.

The impossibility of diagnosing these conditions before operation

is apparent, but the course of all such conditions is pathological, and affect the results of surgical treatment more than has been generally admitted, for all of these conditions affect the general health, which, combined with loss of blood and the influence of mechanical obstruction, due to increase in size or unfavorable location of the tumor, lead to serious complications, affecting the liver, kidneys or heart.

Even calcareous degeneration, nature's most favorable method of guarding against rapid growth, may become the source of great pain from peritoneal irritation, as was the case in one of my patients from Huntingdon, Pa., whose calcareous nodules became as sharp as pin points, and necessitated removal to secure relief from irritation.

The Fallopian tubes and ovaries are subject to interstitial changes in many instances in consequences of fibroid growths.

Fatty liver and nephritis are due to vascular obstruction, and large tumors often cause conservative hypertrophy of the left heart. Frequent hæmorrhages lead to brown atrophy or fatty degeneration of the heart muscle. Peritonitis binding the tumor to the neighboring structures may lead to persistent intestinal torpor or even obstruction.

The age in which the menopause is mostly established becomes the most treacherous, in many instances, and the results of operation before this period have been most satisfactory.

Respecting the influences exerted upon these growths by pregnancy we recognize the fact that sessile subperitoneal tumors of medium size situated in the upper half of the uterus are likely to be favorably influenced by the involution of the uterus following parturition.

Many tumors, as large as oranges, situated in the safety zone, if not associated with other tumors, may entirely disappear provided the patient can nurse her baby.

Tumors involving the lower portion of the uterus are in every way more dangerous and deserve to be classed by themselves.

Early abortion may occur from tumors in the fundus, whilst premature delivery is often induced by those of the cervical portion. If they grow in the cervix and a miscarriage occurs it often is incomplete, as some of the products of conception remain pent up to be infected by septic influences. In these cases imperfect drainage and many conditions which tend to thwart our efforts to secure good

results are present. If these tumors growing from the cervix burrow into the broad ligaments they may lift the uterus, and by filling the pelvis underneath the peritoneum they become the most formidable growth that we are called upon to remove. They cause great pain, and often seriously displace the ureters. It is this variety that complicates pregnancy more than any other. Johnson affirms (Hart and Barbour) that during pregnancy or labor one-third of the mothers and more than one-half the children die.

Hæmorrhage or severe and continuous pain will call for early interference by a procured abortion or complete hysterectomy; for the expectation of the diminution of the symptoms from waiting is seldom realized. The rapid and excessive development of the uterus results in such pressure upon important organs as to lock up the emunctories, causing impaired nutrition, and with the occurence of hæmorrhages, difficult to control, the patient's condition becomes serious.

It has been stated that the mortality after the removal of the intra-ligamentous fibroid tumors reaches 25 per cent., and the occurrence of pregnancy, as a complication, will increase this ratio. In all cases in which fibroid tumors complicate pregnancy near to full term, the following questions arise, viz.: Shall we assist in the dilation of the cervix by mechanical means, or shall we resort to Cæsarian section, and shall the latter be followed by hysterectomy and a complete Porro operation?

If there is perceptible progress made in the natural process of cervical dilatation, we will be disposed to wait and assist the process, but if efforts at dilatation are ineffectual, Cæsarian section will be resorted to before it is too late to save the life of either the mother or the child.

As the Cæsarian section is attended by more than the usual risk on account of defective uterine contraction and consequent hæmorrhage, from the presence of the tumor after the removal of the child and the placenta, and as defective uterine drainage adds another factor to the risks incurred, a Porro operation is likely to be called for. The removal of the uterus entire, after the child and placenta are extracted, becomes the only safe course in those cases in which the tumor is low in the pelvis.

The most favorable cases are those in which the tumor is higher and can be enucleated from its bed, leaving the uterine wall intact, removing the obstruction to the passage of the child per via naturalis.

and leaving the organ restored to its natural condition and functional action. No obstruction from the presence of the tumor means no operation in all cases provided other conditions are favorable; but obstruction means operation, even while other conditions are favorable.

After parturition, degenerative changes afford indications for early hysterectomy when accompanied by rise of temperature, tympanitic distention and local tenderness of the abdomen.

Dr. Russell Andrews has reported to the London Obstetrical Society a case treated by abdominal hysterectomy, three days after delivery, in which a large fibroid had undergone necrosis. The patient recovered.

From these considerations we have to think of securing in such cases, in which fibroids complicate pregnancy, abortion before the viability of the child, if the cavity of the uterus can be properly drained, or otherwise, myomectomy or hysterectomy. The latter is generally to be preferred.

In conclusion, the indications for operative treatment are derived from a careful consideration of all the symptoms produced, or at least referable to the growth, taking into consideration the ever probable increase in the danger from a delayed operation, due to heart, kidney, or liver changes, suppuration and necrosis of the tumors and thrombosis somewhere in the pelvic vessels, with consequent danger from pulmonary or cerebral embolism.

Persistent and profuse loss of blood often leads to fatty degeneration, and in this connection the heart muscle becomes incapable of satisfactory functional action. Fatty cardiac degeneration is responsible for many deaths after an operation, and thrombosis and embolism may develop very suddenly and lead to a fatal termination, which cannot possibly be foreseen.

As functional action in all the important organs becomes seriously impaired from persistent loss of blood, this symptom alone should be a strong indication for surgical treatment.

Mechanical pressure, interfering with the circulation, leads to impaired digestion, hepatic torpor and renal and cardiac insufficiency.

Whilst thoroughly convinced of the prophylactic efficiency of our remedies in controlling hæmorrhage, and in the general improvement of the health of patients in whom these tumors are to be found, I am nevertheless fully convinced of the necessity for the earliest interference by surgical means in all cases in which this treatment

cannot be systematically pursued, or in which its effects fail to meet our earliest legitimate expectations.

DISCUSSION.

Dr. T. J. Gramm: This subject of myoma of the uterus is one that is so extensive that it is almost impossible to cover it in a single paper, yet the doctor has done so as well as can possibly be done. I will not attempt to take up many of the points that are of the greatest interest to me, but wish simply to say that I would like to confirm from my own experience that fact that he has named, that it is not necessarily a very serious matter for a woman to become pregnant who has a small fibroid tumor situated in the upper part of the uterus. Some years ago I was called upon to see a case of this character, where it was impossible at three and a half months of pregnancy to distinguish the tumor from the uterus. In this instance I allowed the woman to proceed to the full time of her pregnancy, and delivered her of the child, and then afterwards did a myomectomy. In fact, the indication for operation in this condition is one that cannot be easily stated. It altogether depends upon where the tumor is located. If the tumor is located in the lower part of the uterus, particularly towards the region of the cervix, it may then be a very small tumor which will block the pelvis. Then we will be confronted with a very serious condition, which possibly will be most safely met by the Cæsarian section. It is, indeed, a grave condition if we have sepsis set in after a miscarriage in a case where the canal has been made tortuous by a fibroid tumor. I once had a sad experience in losing a case which came to me septic, with retained membranes and a large fibroid tumor. Hysterectomy in that case was not able to save the patient. Pregnancy in the presence of a fibroid is not an altogether common occurrence. It is perhaps fortunate that it is not so. The pathological changes which take place in the endometrium are of such a character, hypertrophic in their nature, as to preclude the very common occurrence of pregnancy in the presence of fibroid tumor.

Dr. T. L. Chase: I think the presence of a fibroid tumor of the uterus, no matter what the location of that fibroid, is an indication for its removal. Statistics have been given to us, among the more recent ones Frederic and Noble. Taking into consideration two thousand operations for fibroid tumors of the uterus, and looking

back over the history of such cases, they have come to the conclusion that a fibroid tumor of the uterus left *in situ* will result in the death of the patient in ninety cases out of a hundred. In other words, the patient will sooner or later (with a fibroid tumor of the uterus not removed) run a mortality rate of ninety per cent. When the operations are performed early in uncomplicated cases there is only a mortality rate of between one and two per cent. This rapidly increases as we meet with further complications, usually to a mortality rate of about four per cent. When we consider the low mortality rate of the operation, I think that when such tumors are discovered the patient should have the mortality rate laid before her, and choose for or against operation.

THE PATHOLOGY OF TUBERCULOSIS OF THE FEMALE GENITALIA.

NORMAN S. BETTS, M. D., PHILADELPHIA.

Tuberculosis, in any of its clinical manifestations, is a subject which is to-day of considerable interest to us all. Its seats of possible involvement are so nearly universal that the physician, the surgeon and the specialist are alike concerned in any discussion of the manifold forms of the disease, and in the sphere of the gynæcologist especially the investigations and general interest in the lesions of pelvic tuberculosis are of such comparatively recent date that there still remains quite a field for fruitful research.

Without posing as a specialist in gynæcology I shall endeavor to present a brief synopsis of the present day knowledge of the subject of tuberculosis of the female genitalia from an etiologico-pathological standpoint, believing it axiomatic that scientific prophylaxis, diagnosis and treatment depend primarily upon knowledge of this same etiology and pathology.

History.—Concerning tuberculosis of the female organs of generation, very little was known until comparatively recent years. The first case on record was reported by Morgagni in 1744. From that time until 1850, only scattered cases are spoken of, and the disease has only received the attention which it deserves since the removal of tuberculous tubes and ovaries by Von Mandach, in 1881, and the discovery by Babes, in 1883, of tubercle bacilli in the

vaginal discharges. J. Whitredge Williams, of Johns Hopkins Hospital, has probably done more than any one to arouse a popular interest in the subject, which had been considered a rather unimportant complication of late general miliary tuberculosis or of tubercular peritonitis, the possibility of local primary infection being practically ignored.

Etiology.—The possible modes of invasion of these parts are unusually numerous; among the number may be mentioned the blood and lymph stream, the peritoneum, ostium abdominale, coitus, unclean manipulations, auto-infection by the patient's own fingers, and by extension from adjoining organs.

The relations of Koch's bacillus to tubercular lesions is to-day a subject which needs no further discussion.

Tuberculosis of the genitalia is so rarely an isolated condition that there is frequently the greatest difficulty in discovering the point of original infection, and in giving the lesions their correct chronological order. Infection may occur by the blood, without having caused any demonstrable involvement elsewhere, as seen in some cases of bone tuberculosis.

The various organs of a normal individual have a definite relative susceptibility to tubercular invasion; in other words, the bacillus, having gained an entrance into the body, normally shows a definite elective preference for certain organs, to a certain extent irrespective of the point at which invasion occurred, as has been demonstrated by animal experimentation. At times, however, this relative susceptibility seems to be distorted so that we may find a phthisis of the genitalia and no other lesions discernible throughout the body, even though we may feel sure that infection was a descending one, as it is called if it does not occur per vaginam. Such cases, however, are extremely rare.

The question of the primary or secondary character of lesions has been much discussed, and is of interest from a scientific standpoint However, the practical point is, which lesions are active, farthest advanced and most endanger the life of the patient. In the presence of an active advanced pulmonary phthisis we would not think of operating for an inactive, slowly progressing tubercular salpingitis.

Most pathologists agree that the most frequent modes of infection are by the blood stream and by extension from adjoining structures. Hæmatogenous infection is well demonstrated in puer-

peral women with miliary tuberculosis where the destruction is most extensive at the placental site. That the disease is most marked at the fimbriated extremities of the tubes when these structures are invaded has been considered proof and probably with good cause that infection has occurred from the peritoneal cavity, but as this portion is decidedly the most vascular, is it not reasonable to assume that at least in some such cases the bacilli have reached the site by the blood stream? (Williams.)

Infection from the peritoneum is one of the most frequent modes of involvement. It has been demonstrated by Pinner and others that small particles of foreign matter when introduced into the peritoneal cavity tend to fall to its lowest portions, and are readily taken up by the currents of the tubes. According to Williams, tubercle bacilli may pass from intestinal tubercular ulcers or other tuberculous organs into the pelvic peritoneum, and be wafted into the oviducts without producing any peritonitis.

The lymphatics may form the pathway for infection, and are supposed to be the means by which bacilli may pass through the diaphragm from pleura to peritoneum. Infection may occur secondarily by perforation of tubercular ulcers or fistulæ from the intestine, from peri-rectal abscess, tubercular cystitis or tubercular disease of other parts of the urinary apparatus.

Frequency.—The greatest difference of opinion has existed among pathologists and surgeons concerning the frequency of genital tuberculosis in women.

There can be no doubt that a considerable proportion of all cases of tubercular peritonitis have involvement of the genitalia. The disease occurs most frequently between the ages of 20 and 40 years, the period of greatest sexual activity, but no period of life is exempt. Brouardel recording a case of ten weeks and Krzywicki one at eighty-three years. In my association with Dr. S. W. Sappington, of Philadelphia, I recently found a caseous endometritis with tubercular pus tubes in an infant 20 months old.

Williams, in a monograph on the subject, makes a strong plea for more careful examination of all tubes removed for salpingitis, claiming that tubercular disease is much more frequent than is generally supposed, and that 8 per cent. of all genital appendages removed in Johns Hopkins Hospital are tubercular, and of these only 25 per cent. are diagnosable without microscopic examination.

Concerning the relative frequency of involvement of the different

generative organs, all agree that the tubes are most frequently affected, the other organs, in the following order: uterus, ovaries, vagina, cervix and vulva. The cervix at times shows a peculiar and unexplained power of resistance, a point observed in the case of the infant above mentioned. The lesions in the fundus were far advanced, and a few tubercles were found in the vestibule about the opening of the urethra, but the cervix remained absolutely intact.

The question, which organ or part of organ was first involved, or, in other words, which lesions are primary and which are secondary in a given case, is often an important and interesting one. Netter, in a report of four, presumably primary cases, in the Archiv fur Kinderheilkunde, states that genital tuberculosis is generally primary in children, beginning as a salpingitis, and says that the tendency of primary lesions is to chronicity with connective tissue production, numerous tubercles and little caseation, while secondary lesions are destructive rather than productive, rapidly tending to caseation with less typical tubercle formation. Baumgarten speaks of a greater number of bacilli and fewer giant cells in secondary lesions, while in primary lesions he claims the reverse to be true. Both these authors, however, observe in a following paragraph that no such histological rules hold good invariably, and that in many cases it is impossible to discover where original infection occurred.

We shall now consider briefly the effects of tuberculosis on each of the female generative organs. The histology of the primary tubercle in any part of the tract is identical with that seen elsewhere, giant and epithelial cells are the essential cellular elements of the nodule, which may or may not undergo coagulation, necrosis, caseation, liquefaction, or later, ulceration and abscess formation.

An interesting feature of genital and peritoneal tuberculosis is the absence of incompleteness of caseation in the retro-peritoneal glands, while in intestinal tuberculosis the mesenteric glands undergo very early and rapid cheesy degeneration.

Vulva.—Tuberculosis of the vulva is the rarest form of genital tuberculosis, probably because these parts are better protected externally as well as from the fact that infection usually occurs from above. When present the affection is frequently secondary to tuberculosis of neighboring parts, or cutaneous abrasions have offered a favorable nidus for infection. The microscopic appearances vary considerably. Miliary papules on an inflamed and indurated

base break down and tend to coalesce, forming sharply outlined ulcers which are usually shallow, slowly progressive and accompanied by little pain or impairment of health. Discharges are mostly serous, and when removed show the characteristic grayish-yellow granulations. The woody hardness of cancer is absent and hæmorrhage is slight. The existence of multiple ulcers speaks for tuberculosis as against carcinoma and syphilis. Pulmonary tuberculosis is often coexistent, but in most cases the internal genitalia are found intact.

VAGINA.—The many layers of squamous epithelium with the absence of glands make the vagina especially unsusceptible to tubercular invasion, unless erosion has already occurred. Infection may be primary or take place secondarily from adjacent tubercular organs. The manifestations of the disease are usually confined to the posterior wall, and frequently to its upper third, due to the usual mode of origin by tubercular secretions flowing from an infected uterus. On the other hand, tubercular vaginitis may occur without involvement of any other portion of the genital tract, as in four cases reported by Lancereaux, and several cases are on record where a normal uterus intervened between tubercular vagina and tubes.

A case seen during the last winter in the Woman's Homœopathic Hospital, of Philadelphia, showed a vesico-vaginal fistula without apparent involvement of any other organ. A well marked pulmonary phthisis subsequently proved rapidly fatal.

The pathology here depends upon the etiology and the existence of complications, running a slow course when primary, the tubercles breaking down finally to caseous ulcers which may coalesce or become quite deep. Miliary tubercles are scattered around the margins and fistulæ may occur.

UTERUS.—Tuberculosis of the uterus is fairly common. The greater frequency of factors which favor the entrance of bacteria, as menstruation, catarrhal inflammation, pregnancy and the puerperium makes tubercular endometritis only second in frequency to salpingitis. Kelly says that sufficient emphasis is not laid upon the relationship of the puerperium to tubercular infection. A differentiation from puerperal sepsis may be necessary. Three forms of tubercular endometritis are met with: (1) Miliary tuberculosis, with or without ulceration; (2) chronic diffuse tuberculosis or caseous endometritis, and (3) chronic fibroid tuberculosis.

The first form, miliary tuberculosis of the endometrium, has little

clinical interest, death usually occurring from the effects of an acute miliary tuberculosis of all organs. Typical tubercles are scattered through the endometrium just beneath the epithelium, and depending upon their age and degree of caseation, the mucous membrane may be nearly smooth or show miliary spots of ulceration.

The chronic diffuse form, merely a later stage, is the most frequent. The walls of the uterus become covered with caseous material, the mucous membrane is almost entirely destroyed, and tubercles in all stages of formation are seen scattered through the muscularis. As infection usually occurs from the tubes, the fundus is generally first involved, and for some reason the process is usually confined to the corpus uteri, the cervix being rarely invaded. In the rarer cases where the cervix is affected the fundus is generally normal. In the uterus, as elsewhere in the tract, the disease begins in the vascular part of the mucous membrane in close proximity to blood vessels and between the uterine glands. The centres of the nodule are usually formed by a giant cell surrounded by a zone of epithelioid cells around which the connective tissue perivascular spaces are infiltrated with small round cells. Cullen has shown that the gland cells later take an active part in the production of tubercle tissue, some of them at least being converted into epithelioid cells (Senn). The third or chronic fibroid variety of tubercular endometritis differs from the second in the excessive production of connective tissue in and around the tubercle, which tends to limit the disease.

Fallopian Tubes.—We now come to speak of tuberculosis of the tubes, the most frequent site of the condition in the genitals. The disease is usually bilateral, though frequently apparently of longer standing on one side than on the other. All the coats may be involved; in fact, Senn claims that "circumscribed plastic peritonitis is invariably present in all advanced cases."

Tubercular salpingitis occurs in three forms, as follows: Miliary, chronic diffuse and chronic fibroid, corresponding to the classification of the disease in the uterus. Miliary tuberculosis of the oviducts differs in no way from the disease in any other mucous membrane. Sections show typical tubercles just beneath the epithelium, and usually more numerous toward the fimbriated extremities. Caseation is slight, and the ordinary round cell infiltration of catarrh may or may not be apparent. This stage is not frequently seen, because it so rapidly merges into the second chronic diffuse form.

Here degenerative changes are far advanced, the mucous membrane breaks down more or less completely, the muscular coat becomes infiltrated with giant epithelioid cell tubercles, and the lumen at both ends becoming occluded, caseous material accumulates in considerable quantities. Aran reported a case in which the distention was as high as the umbilicus. Williams was the first to describe chronic fibroid tuberculosis, which differs from other forms in the relative absence of caseation, the production of fibrous tissue and its chronicity. It is possible that at least in some cases this condition was due to pre-existing inflammatory changes, followed by a tubercular infection, since the dense adhesions of both tubes and ovaries in Williams's cases showed no trace of being tuberculous.

Ovary.—Tubercular disease of the ovary, while not common, is by no means a pathological curiosity. The condition is usually secondary and frequently bilateral. Infection may occur by the blood, in which case some trauma, as the rupture of a Graafian follicle, predisposes, or, as is much more comon, the bacteria may reach the organs by way of the peritoneal cavity or tube.

Verneuil classifies tuberculosis here into two varieties. (1) Diffuse tubercular infiltration of the entire organ, which is rare, and (2) encysted form, where the foci are large and undergo caseation, eventually forming abscesses surrounded by tubercles. This classification is accepted by modern pathologists. The histological characters and degenerative changes occur here just as elsewhere, the tissues being exposed to the same influences, except that the epithelial cells, from their origin, strongly resemble the large cells of a corpus luteum, part of the epithelial cells springing from the epithelium, which lines the Graafian follicles, and part being furnished by the stroma of the ovary. As infection usually occurs from the tube, the condition is generally seen as a tubercular abscess between the fimbriated extremity and the ovary walled off from the general cavity by the plastic exudate of a peritonitis.

Placenta.—Localization of tuberculosis in the placenta is uncommon, but interesting from its relation to the question of prenatal infection. Caseous tubercles have been found in the decidua, villi, intervillous spaces and stroma. It is considered improbable that bacilli can pass through a normal syncytium, destruction or removal of this plasmodial layer is necessary before passage is effected from the maternal sinuses to the stroma. Birch-Hirschfeld,

Schmorl and Kockel have found tubercle bacilli in the placenta, in fœtal placenta, villi and in the fœtus removed by Cæsarian section from tuberculous mothers.

In conclusion, I would sum up the salient features of the subject as follows:

1. Genital tuberculosis, while most frequent during the active period of life, may occur at any age, from ten weeks to eighty-three years.

2. The disease occurs more frequently than is generally supposed. Williams claims that about 8 per cent. of appendages removed by him for inflammatory disease are tuberculous.

3. A diagnosis is frequently impossible without microscopic examination. In doubtful cases the demonstration of a few tubercle bacilli in discharges is not sufficient—the association of giant cells is, however, conclusive evidence.

4. It is usually secondary to manifestations of tuberculosis in other parts of the body, but undoubtedly occurs in a considerable number of cases primarily in the genitals.

5. The importance of early diagnosis is increased from uniformly good results of early operation when the disease is primary.

6. All portions may be involved, and the Fallopian tubes are affected in almost all cases.

7. The order of frequency of involvement is as follows: Tubes, uterus, ovaries, vagina, cervix and vulva.

DISCUSSION.

Dr. W. D. Cullin: I quite recently saw a single woman, 43 years old. About two years ago she herself discovered a tumor in her abdomen, and some time afterward her abdomen began to enlarge. This increased quite rapidly, and under medicinal treatment slowly subsided. Recently the swelling again increased to such an extent as to interfere with breathing and locomotion, and compel her again to seek medical aid. Upon opening the peritoneum, which was very much thickened, over two gallons of serous fluid was removed, and also a soft, almost fluctuating tumor. The entire surface of the peritoneum, the stomach, gall bladder; in fact, all the viscera, were completely covered with small nodules, varying in size, containing cheesy material. Upon opening the tumor it was found studded with cystic cavities filled with a gelatinous material.

EXTRA-UTERINE PREGNANCY.

WM. D. CULIN, M. D., PHILADELPHIA.

The classification of ectopic gestation into tubal, ovarian and abdominal has been accepted practically as long as the condition has been recognized. The terms primary and secondary refer to the conditions before and after rupture or change in location of the ovum; primary ovarian and abdominal pregnancies are so rare and so difficult of demonstration that they may be considered as only theoretically possible, and all cases regarded as tubal. Tubal pregnancies are classified according to their location into interstitial, true tubal and infundibular, interstitial or tubo-uterine applies to those cases in which the ovum develops in that portion of the tube which passes through the uterine walls; true tubal occurs in the free portion of the tube, isthmial if it becomes attached in the inner portion and ampullar if in the outer portion of the tube; infundibular applies to that variety in which the ovum lodges and develops near the fimbriated extremity of the tube; if attached to the ovary, it becomes tubo-ovarian.

In the lower animals the presence of spermatozoa in the pelvic cavity, as well as in every portion of the genital tract soon after coitus, has been repeatedly demonstrated, and in the human female it is likewise a fact that the spermatozoa may pass along the entire length of the vagina and uterus to and through the Fallopian tubes. There is no reason to believe that the peristaltic action of the tube toward the uterus, nor the ciliated epithelium of the tube, which assists the migration of the ovum from the ovary toward the uterus, obstructs the progress of the spermatozoa in the least degree. Animal experiments and a few observations upon human beings make it reasonably certain that fertilization of the ovum may occur normally in the tube, the pregnancy, therefore, being primarily tubal; accordingly the problem to be solved in a case of extra-uterine pregnancy is not how the spermatozoa gained access to the tube, but only why the fertilized ovum failed to make its way to the uterus? There must be something characteristic of the tubal mucosa which allows or prohibits the implantation or growth of a fertilized ovum; quite a number of explanations of more or less plausibility have been advanced. Fritze, in 1779, first directed attention to the fact

that peritoneal adhesions by compressing the lumen of the tube or by interfering with its peristalsis might cause the arrest of the ovum; he cited several cases to prove his theory. A number of cases have been reported in which the observers believed that polypi projecting into the lumen of the tube had interferred with the descent of the ovum; it is quite possible, however, that these were merely overgrowths of decidua and appeared only after the arrest and development of the ovum. The statement has been advanced that tumors situated in the walls of the tubes or in adjacent organs may so compress or distort the tubal lumen as to interfere with the passage of the ovum. Diverticula from the lumen of the tube have been demonstrated, and, occasionally in section through the pregnant tube, it has been possible to prove the presence of accessory lumina, long processes which extend from the main lumen of the tube, continue parallel to it for a considerable distance and then rejoin it or end blindly, and it is quite possible that a fertilized ovum, arrested in such a structure, would go on to further development. A number of careful observers have been able to elicit a history of gonorrhœal salpingitis or other inflammatory conditions of the appendages in about two-thirds of their cases. In these cases the arrest of the ovum may have been due to inflammatory adhesions constricting or compressing the tube or to the occurrence of diverticula as a direct result of the inflammatory reaction. Williams, with others, is of the opinion that in the large majority of cases no previous inflammatory disease could be demonstrated, and when such a condition does occur it is a result of the pregnancy itself.

Herzog, in an article published several years ago on the pathology of tubal pregnancy, says: "The etiology of tubal pregnancy is certainly not a uniform one for all cases," and "another factor which I consider important in the production of tubal gestation is an unduly marked participation of the tubal mucosa in menstruation. With others I believe that the tubal mucosa takes part to a certain extent in menstruation; normally the menstrual changes of the tubal mucosa are insignificant compared with those of the uterine mucosa; occasionally, however, the tubal mucosa shows intense menstrual changes." We can hardly doubt that the menstrual changes of the uterine mucosa prepare the uterus for the reception of an impregnated ovum. Whenever the tubal mucosa undergoes extensive menstrual changes it becomes a soil into which an impregnated ovum can easily implant itself. Webster believes that the comparative in-

frequency of extra-uterine pregnancy is due to the fact that the decidual reaction, which he considers essential to the proper implantation of the fertilized ovum, readily occurs in the uterus, but is usually lacking in the tubes. This view has been endorsed by a score of others, who believe that something more than a mere mechanical obstruction is necessary, and who believe that a decidual reaction is the essential prerequisite for the production of tubal pregnancy.

Williams, Webster, Lange and others have demonstrated that the tube in cases of extra-uterine pregnancy is capable of a decidual formation closely approaching in character that of a pregnant uterus. The decidual vera and serotina never occur as a continuous membrane, but at most consist of a few patches of decidual cells, which can be distinguished from the more abundant fœtal cells only by the most careful examination. There is considerable diversity of opinion as to whether or not a decidual reflexa is developed in the tube, but in the early stages, at least, the ovum is separated from the main lumen of the tube by a layer of tissue, which practically represents the decidua reflexa.

The ovum becomes attached to the tube wall just as it does to the endometrium. It penetrates the surface epithelium and burrows down into the tissue beneath it. The changes following the implantation of the ovum differ materially from those occurring in normal uterine pregnancy. As there is no distinct decidual membrane to separate the ovum from the underlying muscular and connective tissue the trophoblast comes at once in contact with the tube wall. This tissue opposes very little resistance to the growing fœtal elements, so that the chorionic villi in a short time extend through the entire thickness of the tube wall and lie just beneath the peritoneal covering, so that perforation becomes imminent.

The formation of the placenta is similar to that of uterine pregnancy, the only difference being that the maternal portion is made up of a tissue containing very few decidual cells, instead of the thick membrane found in the uterus. The development of this organ is necessarily modified by the amount of decidua present, and by compression from the small, narrowed, available space. When rupture occurs, if the ovum survives, the placenta forms new attachments to neighboring structures and continues its growth. The size then will vary directly with the vascularity of the structure upon

which it becomes implanted and with the permanency of the attachment.

The changes in the tube and ovary vary greatly with the location of the gestation sac; there is a decided increase in vascularity, due to the stimulus of the pregnancy; the larger arteries and veins are much hypertrophied and the smaller vessels, especially in the neighborhood of the placental site, are markedly engorged. In most cases the exterior of the tube shows evidence of peritonitic involvement, and a considerable portion of the thickness of the fœtal sac is often due to plastic peritonitis, hypertrophy of muscular fibres occurs, with free development of connective tissue. When the ovum is retained in the middle or inner portion of the tube closure of the abdominal opening usually occurs about the close of the second month. When it is retained near the fimbriated extremity complete closure does not occur. In abortion the connection between the tube wall and the ovum is loosened as a result of hæmorrhage, due to the rapid opening up of maternal vessels by the rapidly growing trophoblast and chorionic villi. If the separation is complete the effused blood gradually forces the ovum toward the fimbriated end of the tube, through which it is ejected into the peritoneal cavity, the hæmorrhage usually ceasing; when the separation is only partial and the ovum remains in situ, the hæmorrhage continues. When the bleeding is moderate in amount the ovum may become infiltrated with blood and increase markedly in size; if rupture does not occur it is converted into a structure analogous to the blood or fleshy mole observed in uterine abortion. The hæmorrhage persists as long as the mole remains in the tube, and the blood slowly exudes from the fimbriated extremity into the peritoneal cavity, where it becomes encapsuled, giving rise to a hæmatocele, or if the fimbriated extremity is occluded, the tube may become gradually distended, forming a hæmatosalpinx.

Simutaneously with the establishment of pregnancy in the tube the uterus begins to enlarge, and up to about the fifth month is usually from one-third to one-fourth smaller than in a normal uterine pregnancy of the same period. After this time it may continue to enlarge, but at a less rapid rate. Rupture of tubal pregnancy, when followed by death of the ovum, checks the growth of the uterus and is soon followed by involution, but involution of the uterus does not take place in either a ruptured or unruptured tubal pregnancy until the death of the ovum. There is a formation of uterine decidual as

in normal uterine pregnancy which, however, shows no trace of decidua reflexa or decidua serotina, and is usually thrown off about the time of the primary tubal rupture. Persistence of life in the ovum after rupture does not prevent the shedding of this membrane. With a patient presenting the characteristic signs of pregnancy the metrorrhagia which accompanies this discharge of the uterine decidua might readily be mistaken in some cases for abortion of an intra-uterine pregnancy, and without a thorough pelvic examination a grave mistake be made. All the classical signs and symptoms of pregnancy are present, though modified to a certain extent, prior to the fourth month. The three cardinal points in the diagnosis are, disturbance of menstruation, pelvic pain and the presence of a mass connected with the uterus. Menstruation is very irregular as to time of appearance, amount and character of flow; it may be absent entirely or vary from a slight show to quite severe hæmorrhage; the blood usually contains small or larger patches of mucosa. The pain is usually severe, more or less intermittent in character, the contractile pain due to uterine contractions, and possibly the sharp, tearing pain, accompanied by syncope, which indicates rupture of a greater or less degree.

Prior to rupture a well defined movable mass can be outlined at some point along the course of the tube, or as an irregular bulging at one corner of the uterus.

The disproportion in size of the uterus to the period of gestation, which becomes more marked as pregnancy advances, is a valuable guide.

In the great majority of cases rupture occurs before the fourth month, and very frequently in the early weeks before pregnancy may be suspected, and is always accompanied by hæmorrhage more or less severe in character; if into the peritoneal cavity, the bleeding is apt to be continuous, and may be fatal before assistance can be obtained. If the rupture occurs into the broad ligament, the hæmorrhage may be checked spontaneously with the formation of a broad ligament hæmatoma, the ultimate outcome depending upon the degree of placental attachment remaining.

Unfortunately, the signs and symptoms of extra-uterine pregnancy do not differ materially from those of a normal pregnancy, so that in the majority of cases the physician is not consulted until serious trouble has intervened.

The treatment is entirely surgical. All other measures are futile.

As soon as an unruptured extra-uterine pregnancy is diagnosed its removal by laparotomy is urgently indicated; rupture may occur at any moment and fatal hæmorrhage take place before operative aid can be obtained. Should the case not be seen until rupture has occurred, as most often happens, we are confronted with quite a different proposition. The mortality of such cases, operated, is about 6 per cent., and if unoperated, 90 per cent. Immediate operation is demanded and should be insisted upon unless the patient is already moribund. The abdomen should be opened as rapidly as possible under local anæsthesia if necessary, and the bleeding surfaces quickly secured by large clamps, after which the operation may be continued at comparative leisure. If the patient is not seen until the acute symptoms have subsided and the effused blood has become encapsulated, she should be kept in bed and carefully watched, operative procedures being instituted only when the hæmatocle increases in size or presents evidence of suppuration.

ETHER'S EFFECTS IN ABDOMINAL AND PELVIC SURGERY.

PAUL F. FELSBERG, M. D., PHILADELPHIA.

There being at the present time an effort to rob surgery of all unpleasant effects, referable to the comfort and recovery of the patient, and in view of the presentation of new anæsthetics, also combinations of some older ones, this paper is presented for your honorable consideration, with the hope that it will do something towards holding ether in the place it has so long maintained.

The data here given has been taken from records made at the time of the operation and subsequent to it, embracing a series of 200 cases, confined to the abdomen and pelvis, in the service of Dr. T. L. Chase. The preparation of the patient was the same in all cases.

The anæsthetic is always given in another than the operating room, thus lessening excitement of the patient.

Before giving the ether the heart, pulse and lungs are examined; chest expansion approximated; the pupils noticed for their state of contraction or dilatation and the buccal cavity also receiving attention.

The patient is instructed to close the eyes and breathe as nearly natural as possible. No talking is allowed either by patient or others in the room during the administration.

The Allis inhaler is used. Instead of it being allowed to rest on the chin, the edge of the cone is held away from it for a time. In consequence, the patient's confidence is obtained by avoiding sense of suffocation and allowing a larger amount of air than ether, and efforts at swallowing and choking infrequently occur. If the latter does appear more air is given to the point of removing for a few moments the inhaler. In this way irritability of the fauces and larynx are overcome and the secretion of mucus is seldom seen, even in the stout women with short necks. As the patient's throat becomes more tolerant of the ether vapor the amount of air admitted is decreased by gradually bringing the edge of the inhaler closer to the chin, finally having the cone fit the face as closely as possible. As the drop method is always used, the ether is added with increasing rapidity, as the respirations become more regular and deeper; with care mental and muscular excitement can be avoided.

During the operation the patient is kept in the stage of anæsthesia requisite for the work to be done and never more. Physiological and not toxicological effects are aimed for. If the operative procedures permit the depth of anæsthesia is lessened, or, if needs be, reversed. To follow this method the administrator must have worked often with the surgeon, so that he is closely acquainted with his technique; otherwise this course is unwise and the anæsthetizer must not depend upon any one sign for measuring the depth of anæsthesia.

As the operation draws to a close the ether is progressively diminished; by doing so the slight shock given the nerve endings reflexly stimulate the heart and blood-vessel contractions, raising arterial tension, lessening or preventing shock and using up, as it were, the remaining ether vapor in the system. Also, it hastens the return to consciousness of the patient, which is about fifteen minutes, on the average, for this series of cases.

Before the patient is removed from the operating room all damp clothing is replaced by those dry and warm. This has two advantages—first, it lessens the chance of bronchitis or pneumonia, a complication not seen in the service of Dr. Chase; second, it obviates all unnecessary handling of the patient, as they are coming out of ether and possibility of vomiting diminished.

It has been our aim to reduce vomiting to a minimum. In doing

so the patient is made more comfortable; fresh wounds, whether in the abdominal cavity or pelvis, are not strained and post-operative adhesions lessened.

Should vomiting occur, the treatment giving the best results sults is the frequent use of water as hot and as much as the patient can take. This carries out the idea suggested by Geo. S. Brown, quoted by the Medical Record, who advises lavage before the patient has recovered from the anæsthetic, continuing it until the returned water no longer smells of ether, his idea being the ether is eliminated by the stomach, to which we take exception. Both of these methods do wash out the stomach, but the former has the advantage over the latter in that should vomiting occur the stomach has something to contract upon and retching is reduced.

For some time it has been our belief vomiting is not always the result of the administration of ether, but due to a combination of causes, and to prove it the amount of ether has been reduced to the least quantity possible consistent with the welfare of the patient and surgeon.

Position of the body is a factor in the cause of vomiting. The more the body lies in a horizontal position the less the emesis, though there are exceptions. Of cases operated in the dorsal position 24.7 per cent. vomited, as compared with 30.3 per cent. for the Trendelenburg position.

The number of operations done at one sitting increases tendency to vomit. Of 145 cases of one operation only the percentage of vomiting was 24.9, as compared with 55 cases in which the number of operations performed in one tempo equalled 2.11, the vomiting was 31.1 per cent.

Patients operated in the Trendelenburg position, one operation at a time, give a vomiting percentage of 28, against 31.1 for those in the same posture having more than one operation. Dorsal positions show relatively the same differences, as the percentage of vomiting for one was 22.8, compared with 29.3 for more than one operation at a time.

The amount of ether must be considered. In the dorsal position there is a direct ratio between amount of anæsthetic and vomiting, for the latter the average amount was 5.7 ounces, against 4.2 ounces for those that did not vomit. In Trendelenburg positions this does not hold good.

Time also appears to be a factor in tendency to vomit. The

operations done in the dorsal position give an average time for those that vomit of one hour and four minutes, and one hour and three minutes for the non-vomiting cases. Again, this does not hold good for Trendelenburg posture.

Individual and atmospheric conditions must be considered among the causative factors of vomiting, for in some operations showing comparatively small amount of ether and time, regardless of position and nature of operation, vomiting occurred.

It has been noticed that operations done in the Trendelenburg position, whether of one or more procedures, the vomiting is always more than for those done in the prone posture, and amount of ether and time does not appear to alter the effects. The only theory that will explain this condition is, the Trendelenburg position reverses the natural intestinal current, enhanced by intra-abdominal manipulations, and probably associated with a relaxation of the pylorus of the stomach.

Here then through the effect of gravity, force and the removal of a natural guard, the bile and nearby intestinal secretion enter the stomach cavity and remain there acting as an irritant emetic; hence, the often seen note made by the nurse at the bedside, "Vomited brown or green substance." The following helps to strengthen our belief in this theory. In twenty-six cases operated for appendicitis vomiting occurred in 23.1 per cent.; here we have the prone position, as a rule, and the minimum of abdominal manipulation, amount of ether and time. Take an opposite illustration, in which the amount of abdominal manipulation, ether and time is possibly at a maximum, and the position decidedly Trendelenburg, as seen in myomectomies, hysterectomies, ectopic pregnancies, oophorectomies, the percentage of vomiting was 33.7, 32.3, 40 and 39.5, respectively.

The nearer we approach the pyloric end of the stomach the greater the vomiting, as 60 per cent. of all gall bladder cases vomited, while the further one is away from the intestines the less the vomiting, as seen in curettements, for when this operation was done and not associated with any other the amount of emesis was 18.8 per cent.

The appended tables will give you an opportunity of perusing this subject at leisure should any desire to do so.

In summing up one readily appreciates the effects of ether in abdominal and pelvic surgery. Ether given by the unexperienced, such troublesome conditions as mucus, vomiting (operative and post-operative), shock, cardiac depression with renal and pulmonary

reflexes, strains on fresh wounds by emesis, prolonged convalescence, and the future annoyance of post-operative adhesions, are likely to arise. If not all, then certainly most of these complications can be avoided when the anæsthetic is given by one skilled in the work.

From our experience with ether, we feel that of right the claim can be made that when it is given by the drop method, first mixed with air, and then air mixed with ether, avoiding faucial and laryngeal irritation, mental and muscular excitement, by not hurrying to get the patient "under," much is gained at the start.

The depth of anæsthesia should be sufficient for the operation, and the patient's welfare, and not more, progressively decreasing it as the operation nears its completion, thereby stimulating the nerve endings, thus increasing cardiac and vascular tone, and diminishing the amount of shock and the length of time of return to consciousness.

Changing the patient's garments, in the operating room, and whatever handling that is necessary, be done while they are still under the influence of the ether, lessens possible bronchitis, pneumonia and vomiting.

When vomiting does occur, water, as hot and as much as the patient can take, does wash the stomach of any substance that may have found its way into it, such as bile and intestinal secretions, and gives the organ something to contract upon, reducing greatly the effect of retching and vomiting.

In following out the above ideas many unpleasant consequences have been avoided, and the pleasure of having the patient promptly returning to consciousness, without vomiting following, is gratifying.

Even if vomiting does occur it is seldom for any length of time. Shock has been reduced so that stimulants are seldom required, even in bad cases. The most desirable result is to help the patient to a prompt and uncomplicated recovery. Of course, I do not lay claim to all credit in the latter, or, in fact, to much of any of the success of the operation, for so much depends upon the surgeon.

TABLE NO. 1.

AVERAGES FOR OPERATIONS DONE IN THE DORSAL POSITION.

	One operation—88.		More than one operation—58.	
	Vomited	Did not vomit.	Vomited.	Did not vomit.
Total, ...	20	68	17	41
Amount of ether, . .	5.7 oz.	4.2 oz.	8.7 oz.	7.3 oz.
Time under ether, .	1 hr. 4 min.	1 hr. 3 min.	2 hrs. 6 min.	1 hr. 37 min.
Age, ...	41.5 yrs.	40.2 yrs.	36 years.	37.8 yrs.
Per cent., ...	22 8	77.2	29.3	70.7

TABLE NO. 2.

AVERAGES FOR OPERATIONS DONE IN TRENDELENBURG POSITION.

	One operation—57.		More than one operation—58	
	Vomited.	Did not vomit.	Vomited.	Did not vomit.
Total, ...	16	41	19	39
Amount of ether, .	6.3 oz.	5.6 oz.	6.1 oz.	7.2 oz.
Time under ether, .	1 hr. 24 min.	1 hr. 27 min.	2 hrs. 1 min.	1 hr. 36 min.
Age, ...	34 yrs.	33.6 yrs.	36.6 yrs.	39 yrs.
Per cent., ...	28	72	31.1	68.9

TABLE NO. 3.

SUMMARY.

	One operation—145.		More than one operation—55x2.11 at a time—116	
	Vomited.	Did not vomit.	Vomited.	Did not vomit.
Total of all oper., .	36–24.9 %	109, or 75.1 %	36, or 31.1 %	80, or 68.9 %
Dorsal position, . .	20–22.8 %	68, or 77.2 %	17, or 29.3 %	41, or 70.7 %
Trendelenburg position, ...	16–28 %	41, or 72 %	19, or 31.1 %	39, or 68.9 %

TABLE No. 4.

COMPARISON OF OPERATIONS USUALLY DONE IN THE DORSAL POSITION.

	Curettements		Amputation of Cervix Uteri	Trachelorrhaphies		Ant. Colporrhaphies		Perineorrhaphies		Vaginal Adhesions	Vulvo-Vag. Cysts		Amputation of Labia Vagina	Vaginal Examination	Appendectomies		Herniotomies	Abdominal Sinus	Kidney Operations	Repair of Urethra
	Alone	Combined		Alone	Combined	Alone	Combined	Alone	Combined		Alone	Combined			Alone	Combined				
TOTAL,	33	11	3	3	15	2	1	6	11	1	1	2	1	3	26	13	4	2	5	
DID NOT VOMIT—																				
Amount of Ether in Ounces,	3	5.3	5.5	3.5	6.5	6.5	11	5	7.6	8	8	6	1.5	2	5.7	7.4	3.7	6.1	6	2
Time Under Ether—Hours,		1	2		1	1	1	1	1	2		1	1		1	1	1	1	1	
Minutes,	30	23	38	52	29	22	58	14	44		50	10	5	19	16	35	7	10	15	
Age,	32	38	50	29	35	55	45	47	39	45	27	27	17	26	28	33	42	43	50	
VOMITED—																				
Amount of Ether in Ounces,	3	2.9	3	8	8			8.9	9.3						5.3	9.1	5.1		5	9
Time Under Ether—Hours,		1	3		2			1	2						1	1	1			1
Minutes,	24	33		50	3			21	10						8	35	20		56	20
Age,	35	37	28	45	30			42	35						23	35	48		30	35
PER CENT.—																				
Vomited,	18	45	50	33	20			66	28						23	23	50		20	100
Did Not Vomit,	82	55	50	67	80	100	10	34	72	100	100	100	100	100	77	77	50	100	80	

TABLE No. 5.

COMPARISON OF OPERATIONS DONE IN TRENDELENBURG POSITION.

	Uterine Ventro Fixo-Susp		Myomectomies		Hysterectomies		Ovaries Prolapsed	Oophorectomies		Salpingotomies		Broad Ligament Tumors Combined	Ectopics		Exploratory Celiotomy	Abdominal Adhesions	Gall Bladder	Urinary Bladder
	Alone	Combined	Alone	Combined	Alone	Combined		Alone	Combined	Alone	Combined		Alone	Combined				
TOTAL,	10	10	8	6	9	1	3	12	19	4	15	2	3	5	1	1	5	2
ETHER—Amount in Ounces—																		
Did Not Vomit,	3.4	6.4	5.3	5.2	7.1	12	6.5	6.4	7	4.7	6.9		5.7	6.8	2.5	6	7.7	7
Vomited,	6.3	2.9	5.8	8.5	7	. .	. .	7.5	8.2	9.5	5.7	10	. .	8	. .	. .	6.3	8
TIME UNDER ETHER—																		
(Did Not Vomit)—Hours,	1	1	1	1	1	2	1	1	1	1	1	. .	1	1	. .	1	1	2
Minutes,	2	33	27	14	54		21	27	37	23	41	. .	6	35	46	11	16	9
(Vomited)—Hours,	. .	2	1	2	1	. .	. .	1	1	2	1	2	. .	1	. .	. .	1	2
Minutes,	58	10	43	14	21	. .	. .	38	44	5	51	18	. .	31	. .		13	15
AGE—																		
Did Not Vomit,	38	37	39	41	35	51	23	25	37	27	38	.	30	31	36	52	41	22
Vomited,	38	38	53	39	47	. .		40	32	24	31	42	. .	37	.	. .	48	20
PER CENT—																		
Did Not Vomit,	64	90	75	68	78	100	100	67	61	67	67	.	100	60	100	100	40	50
Vomited,	36	10	25	32	22	. .	. .	33	39	33	33	100	.	40	. .	. .	60	50

DISCUSSION.

DR. F. W. BOYER: When I administer ether or chloroform, I invariably add ten drops of turpentine to four ounces of ether. I felt that its action upon the heart was a benefit, and also upon the respiratory muscles as a matter of stimulation. Paralysis is less liable to occur because of the use of turpentine. Also from some unknown reason I have my patients breathe through the mouth when they take an anæsthetic. I do not know where I got the second idea from. It is one I have pursued for many years. The other is an Italian surgeon's suggestion, which I read many years ago and have followed ever since.

ECTOPIC PREGNANCY; ITS EARLY DIAGNOSIS.

H. M. GAY, M. D., PHILADELPHIA.

There is no more interesting subject in medicine than ectopic pregnancy, considered from an abstract standpoint, but if any physician present imagines that ectopic pregnancy is an abstract subject, he is destined to a sudden and violent change of opinion, as the writer can testify, having unearthed three cases in two months in ordinary general practice. Unfortunately, the usual treatment of the subject in text-books consists of three parts: First, an academic discussion of the various theories as to etiology; second, an elaborate classification of forms and types, and third, a confusing table of differential diagnosis, mostly confined to conditions obtaining after the third month; truly ashes in the mouth of the physician thirsty for help in an emergency. However, all authorities are refreshingly unanimous as to treatment—immediate laparotomy. The treatment decided upon, then, the only desideratum is an early diagnosis. In no condition is an early diagnosis so absolutely imperative as in ectopic pregnancy. The spectacle of a man waiting for the bones of a fœtus to be delivered, per rectum, would be ridiculous if it were not so sad. A patient suddenly dying of hæmorrhage while her physician is waiting definite symptoms is almost enough to drive a conscientious man from the profession.

When, and how, then, can an early diagnosis be made? In the

first place the etiology is, with one exception, absolutely valueless in diagnosis, because it includes any and all causes congenital and acquired that interfere with the patency of the tube. Hence, we must include all inflammation of the tube or its mucosa; all external inflammation that might involve the tube in adhesions; all internal or external neoplasms that block the lumen or obliterate it by pressure. Add to these congenital diverticulæ, and we have covered nearly the whole field of gynæcology. In a word, *any* woman may have a tubal pregnancy. The exception mentioned a moment ago is this, that women are more liable to this condition after a period of sterility, hence we suspect it in women who have been married several years and have never conceived, or who have had several children at rather frequent intervals and then ceased, especially if, in the meantime, they have suffered from pelvic inflammation or developed some pelvic growth.

Now for the classification; and let me say right here that the great majority of ectopic pregnancies are originally tubal. It is not necessary to quote the figures, but I am well within the limit of truth when I state that in fully ninety-five per cent. of these cases the ovum lodges in the tube primarily. It may rupture into the adbominal cavity, burrow between the leaves of the broad ligament, or abort partially through the ostium abdominalis, but, primarily, it lies in the tube. As to ovarian pregnancy, it is a curiosity. The interstitial variety is almost equally rare, and usually aborts into the uterus to be expelled, or remains in situ, to terminate, finally, in a normal labor. Hence the diagnosis of this condition narrows down to a consideration of tubal pregnancy.

Let us for a moment, in a general way, consider the conditions underlying the characteristic early symptoms of tubal pregnancy. In the first place, we have a tube which, at the isthmus, has an outside diameter approximating that of a goose quill, and at the ampulla we might compare it in size to an ordinary lead pencil. This narrow tube becomes the resting place of the ovuum, which, in the short space of four weeks, attains the size of a pigeon egg, and in eight weeks, if it lives, will have atained the size of a hen's egg. This, then, is the crucial point of the whole matter; the ovum cannot, except in the most extraordinary cases, remain in the tube longer than from six to eight weeks without rupture or abortion.

If our diagnosis has not been made by that time it will never be made, except by operation or autopsy. Our tumor, which is an im-

portant point in diagnosis, and which may often be detected by inspection, is gone; our peculiar, agonizing, sickening, paroxysmal pain is gone; our characteristic flat and rigid abdomen is gone. What we have left is either a condition simulating severe peritonitis with rapid pulse, fever and distention, or a deathly pallor and air hunger, which rises up and shouts the dread words, "internal hæmorrhage" at us, and our diagnosis is confirmed by the undertaker.

Let us follow a typical case. About twenty days after a normal menstruation a woman has pelvic pains, which are sharp, stinging, sickening, paroxysmal, and may be associated with faintness and pallor. She thinks she is about to menstruate. Sure enough, after two or three days she begins to flow. The flow is red, scanty, intermittent but persistent. This goes on for a week. The woman thinks she is suffering from dysmenorrhœa, *so does her doctor.* Gentlemen, nine cases out of ten, seen within six days from the onset of pain, are diagnosed as dysmenorrhœa. How, then, may we differentiate? The pain of dysmenorrhœa is massive, dragging, is reflected through to the back or down the thighs, and ebbs and flows indirectly with the bloody discharge, while the pains of tubal pregnancy are sharp, insistent, sickening, and are not referred; they are not influenced by the flow; they are associated with rigidity and an exquisite point of increasing tenderness over the affected side. Between the pains we may palpate our pigeon-egg-sized tumor. The associated signs of pregnancy will be present, *e. g.*, enlarged breasts, nausea, etc.

If no diagnosis is made in a week the scene changes slightly. The pains and flow increase, some shreds appear in the discharge. The woman changes her mind and thinks she has an abortion, *so does her doctor.* Nine cases out of ten seen in the second week after the onset of pain are first diagnosed as abortion, but may be differentiated by the fact that the flow is too scanty for abortion; there is no dilatation, although the pains increase. If the tube has not ruptured the tumor is sure to be palpable. The character of the pain is different in the two conditions, and in tubal pregnancy is localized over the tender point in the tube and not in the uterus.

The differentiation from tubo-ovarian abscess or pyosalpinx need occupy little time. The presence of flow, absence of fever and difference in onset and history ought to be sufficient.

The time has come when a multiplicity of symptoms has given

place to pathognomonic signs. We see appendicitis diagnosed on three cardinal symptoms, pain, tenderness and rigidity; cholecystitis on two signs, clay-colored stools and tenderness. Now I propose three signs for tubal pregnancy, pain of the type described above, tenderness over one tube, and tumor. I have purposely left out one important symptom, viz., syncope, because it can only come from one cause, that is, hæmorrhage, and the first attack may be, often is, fatal.

In this short paper I cannot hope to have covered this important subject, but I feel that even a hint is not to be despised if it helps to throw light on a condition which, in a few days, changes from what is to all intents and purposes a simple, non-inflammatory tumor to one which may and does cause the loss of hundreds of lives annually.

DISCUSSION.

Dr. E. R. Snader: I am very much interested in ectopic pregnancy, because some years ago one of our celebrated gynæcologists read a paper on the subject and made it as clear as daylight that the diagnosis of ectopic pregnancy was a litle more readily made than finding a wart on a man's nose. Unfortunately for me, the few cases I have seen were not of that description. I do not know whether that particular physician was specially a genius or I was specially stupid, but certain it is my experience in attempting diagnosis of ectopic pregnancy has been of a different character. I was summoned to "Fishtown" one night by a fellow practitioner who told me, "I don't want you for diagnosis; I want you for defense. I have a widow, of the 'verdant' type, who has produced an abortion upon herself. She has peritonitis, and she is dying. I had nothing whatever to do with the abortion, and I want defense, because in all probability there will be questions asked by the coroner after her death." I went in to see the patient, and found her white, voiceless, with an erratic pulse and tender abdomen. She gave me a history, in a husky voice, that she had attempted to produce abortion. The doctor's diagnosis was septic metritis, followed by secondary peritonitis, but I elicited in my attempt at obtaining history that she had taken twenty-five cents worth of Aloes. It had "a moving" effect. She was after that effect. From the physical signs I found I could have diagnosed ectoptic pregnancy but for the fact that she assured me, inasmuch as she had had considerable experience in that

line, she was absolutely certain everything had come away. She was somewhat of a liar. The doctor did not want me to make a uterine examination of that case, because he felt satisfied with his diagnosis. I said, "I can't give any testimony in your favor unless I do." So I examined her, and I found the cervix very little altered in size or consistency, the uterus apparently a little enlarged and an immense mass to the right of the uterus. I said: "She has done nothing to produce septic metritis. This woman has taken medicine internally." I found the peritonitis in a distinctly localized area, over the McBurney point. There was every sign of appendicitis. This woman, it seemed reasonable to suppose, had set up a catarrhal inflammation of the intestines by Aloes, and that inflammation had extended to the appendix. Either suppuration or serum caused the mass in the right iliac fossa. The diagnosis was appendicitis. I said: "This woman has a chance for her life if the abdomen is opened." The operation was agreed upon. After his examination of the case the surgeon said: "I never had a more typical case of appendicitis in my life, dulness on percussion in right iliac region, a mass in the vagina, a localized peritonitis over the McBurney point, and absence of signs of infection or inflammation in the uterus." The surgeon immediately proceeded to cut. Blood in volumes gushed out. You know the rest. She recovered. Here the diagnosis of extra-uterine pregnancy would have been as possible as that of appendicitis had we not relied upon the history of the woman's having successfully produced an abortion by drugs. She was not as "verdant" as she seemed.

My second "easy" case occurred in my own practice. A lady who had not had children for several years came to me one morning. She had missed her period. I prescribed for her. She thought she was pregnant. I made no examination. About five weks after that I was sent for to come and see her because she had fainted. When I got to the house she had a slight vaginal hæmorrhage. I examined her and found a tumor a little bigger than a pigeon egg. I thought the woman was pregnant. She had an enlarged uterus, had a tender abdomen, had fainted and was bleeding. It seemed to me a reasonable presumption that I was dealing with ectopic gestation. I got Doctor Smedley to come down and see the case. He agreed with me. He said he would go and get ready for an operation. The woman was commanded to be absolutely quiet. About two hours after that I was sent for, because she had got up

out of bed and had fainted again. When I got there the second time she had passed from the vagina nearly a pint of pus, and her ectopic gestation was gone. She was not pregnant. The pus tube simulated an ectopic pregnancy, taken in connection with the symptoms.

My third case was a woman nursing a baby, in bed, with abdominal pains. The doctor told me: "They run around to my house and tell me this woman is in mortal agony. By the time I get around there she is all right. I can't find anything about the abdomen. That sort of thing has kept up now three or four days. I was not much alarmed about it, because I had a suspicion she is hysterical. She has not a particle of fever. I can find nothing about the abdomen, although she says she had menstruated now for the first time since her last pregnancy. I am getting a little bit alarmed, because her pulse is crawling up to 100." I went in and looked at that woman. I went over her abdomen thoroughly. I did not make a vaginal examination, because I thought she was menstruating. There were only two points of tenderness with the deepest kind of pressure that I could find. One was up in the region of the umbilicus, by point pressure, deep down, until I almost touched the spinal column. The other was down in the appendicular or ovarian region. There was no rigidity, no localized peritonitis. I said: "This case is so obscure I would suggest to you to put her in a hospital for further observation." She was taken to the hospital that night, and I believe was examined by a gyæcologist, who said he thought it might be a pelvic case. A short time afterward she again had pain and collapsed, and she was laparotomized for diagnosis. They opened her and found ectopic gestation. That is three distinct attempts I have made at diagnosing ectopic gestation.

I have still another case. I was called to an outlying suburb. The woman had not had a child for eight years, but ultimately again became pregnant. She had tried various "home methods" for the induction of abortion without any success whatever. She began to have considerable abdominal pain. She called her doctor in, who suspected what she was doing. This woman had distinct, terrific attacks of abdominal pain with collapse. She had had five of them. She had not had menses for two months. She had introduced into the uterus the nozzle of a household syringe, squirted about two quarts of water into the uterus and had produced a menstrual flow, but that is all apparently. When I saw that women she was all twisted up in knots, without any temperature, scarcely showing any color

whatever, exquisitely tender all over the ovarian region, with what I thought was an area still more exquisitely tender.

A vaginal examination was made. I found the vagina extremely tender, the whole right portion by abdominal palpation exquisitely tender; a mass in that region. I could not separate the uterus or tube from this mass, which was exquisitely tender. She had not been pregnant for a good while. She had localized peritonitis. She had agonizing pains. She had a discharge of blood. She had tried to get the membrane and did not get it. Was there any other diagnoses possible without an abdominal exploration? I suggested that, although I felt perfectly confident I was dealing with ectopic gestation. That woman was taken to a hospital, seen by a surgeon, the diagnoses corroborated and put to bed. He was not ready to operate until the next day. The next day she did not want any operation. It was postponed two days longer. Then I was invited up at a certain hour. We are in a hurry to get the surgeon to do these operations, but he takes his own time in getting them done. He took his time getting this done. I wanted that woman operated immediately that night. The surgeon was not ready. When he finally agreed and set the hour and was already for the operation, his hands cleaned and everything done up, he said: "Doctor, would you like to examine her before I operate?" "Certainly; I would be delighted." I went into that vagina, but did not find anything at all to operate on. The whole mass had disappeared, and all tenderness had gone. I asked the doctor who called me in consultation to see this case whether he could find anything. He could not find anything. Then the surgeon dirtied himself long enough to go into the vagina. He could not find anything. What was it? Estopic gestation? Any aid we can get in diagnoses of this description is of the greatest possible value, and I cannot thank Dr. Gay enough for his intensely practical paper.

Dr. A. E. Heimbach: I thought I would give you a little of my experience of fifteen months ago. I was suddenly called to the house of a young lady, a bride of six weeks, happy, healthy, strong, about nineteen or twenty years of age, with a severe pain. As she went upstairs—she had rooms on the third floor—she barely reached the third floor when she had an excruciating pain which threw her down, and she called for help. They helped her into bed and sent for me hurriedly. When I came there I found the woman perfectly pulseless. I couldn't find any pulse at the wrist; belching, looking

as white as a ghost, tremendous pains in the epigastrium, no pains in the lower part of the abdomen, doubled up and broken out into a cold sweat in warm weather. There was quite a little cholera morbus about at the time, and therefore this suggested to my mind. I thought I was going to have another case of cholera morbus. I waited a little and did not get rice water stools. She was getting along very nicely. I knew very well there was loss somewhere else, and I told the family it was a very hard matter to decide what it was, but I could positively decide there must be internal hæmorrhage. She had her changes, she told me, just before she was married, and about four weeks afterward she had a little sign, not much, and two weeks after that she had this occurrence. It was after dinner they called me. I went home. The nearest surgeon was fifty-six miles away. I telephoned him. He said he could not come until next morning. He arrived on the 9 o'clock train, examined her and corroborated my diagnosis. We prepared her as quickly as we could, and on the third floor where the occurrence had taken place we put up temporary arrangements for operation. I put her under chloroform, and she took it very kindly; it only took a few drachms for the whole operation. When he opened up the abdomen it was like a geyser, the blood just shot out. We took it out easily, reached the left side, and she had pain mostly towards the right, but he found nothing on the right side, and he reached over to the left and found the fœtal mass, tied it off, delivered it, about the size of a walnut, ruptured, just split apart, sewed her up, put her back to bed and got through about 12 o'clock. Inside of twenty-four hours after the thing happened he got her back to bed and she recovered all right. Shortly after the husband asked me did I think this would ever recur. I said no, not as far as that is concerned, "but there is something in store for you on the other side for the future of your family," and I am engaged to confine her again in about six weeks from now.

Dr. T. J. Gramm: It seems to be one of the remarkable facts about the constitution of the human mind that if you have not your mind fixed upon something you are seeking you will not find it. The history of bacteriology admirably illustrates this fact. Micro-organism has been thought to cause disease for a great many years, and in a vague manner, destined to failure, their relation to disease was unsuccessfully sought for. If we have not our minds upon exuterine pregnancy, if we have not been properly taught it in the

schools, if we have not fixed our attention upon the subject by subsequent reading of the literature, which may have been accessible to us, we will never diagnose it. As in other diseases, cases may occur in which one or more of the cardinal symptoms may be absent. In other words, there is no one symptom which is always present. I am really amazed at the discussion of my friend, Dr. Snader. There is no one who would criticise another physician more promptly than my distinguished friend, if he were to put his head to a person's chest, not knowing what he was going to seek for, and by that means alone attempt to make a diagnosis of the condition of that chest. Dr. Snader will tell you when you are about to diagnose heart disease you must have clearly in mind the symptoms you are going to hunt for, and must know the definite locality where the symptoms will be most prominently heard, and there try to find them. Suppose you tried to diagnose some lesion of the mitral valve, and having heard a murmur, then proceeded to examine the right side of the chest, instead of tracing that murmur to the left and outward!

I want to tell you some of the symptoms of ex-uterine pregnancy that you can keep in your minds; but if you do not look for the condition you will never recognize it. The very first case of ex-uterine pregnancy with which I came in positive contact was one where two physicians were in attendance upon a woman for two nights in succession, waiting for her to be delivered, and finally, labor pains ceased. They said, "You have missed your count. You were mistaken in your time." She was a little hot-headed, and so she did not want those doctors any more, and would have another. The latter called me in. We came to the conclusion that the woman was pregnant, only the pregnancy was outside the womb That woman had carried that child for 11½ months in her abdomen. That was my first experience with ex-uterine pregnancy. As regards symptoms, you can understand them very easily if you remember the conditions that have been so admirably described here in these two papers. In the first place, the woman has not recently conceived. In the next place, she may have missed one or two menstrual periods, that will make eight weeks. She may have at eight or twelve weeks an atypical hæmorrhage from the uterus. In the next place, if the case goes on to about the twelfth week she will usually fall down in a sudden faint, with pain in the abdomen, and will have the symptoms of internal hæmorrhage. If you examine the woman you will

find at the side of the womb, somewhere in the lower part of her pelvis, a mass. In addition to that, if you will go so far as to make a microscopic examination of the membranous discharge that comes from that uterus, you will find a remarkable condition of affairs. You will get a picture such as you will not get in all microscopic research anywhere, except you get the specimen from an extra-uterine pregnancy. That is, you will see decidual tissue. It will be perfect, and will show all the beauty which characterizes that structure, only it will contain no fœtal contribution to the formation of that placenta. That is to say, you will see decidual cells, but you will find no chorionic villi, because the villi of the chorion are a fœtal contribution to the formation of the placenta. If we look at this subject in this clear-cut manner that I have mentioned, it goes for nothing if a man even can relate dozens of cases where the woman had some symptoms, and the others were not developed during the course of the examination. In other words, you must have your mind fixed upon extra-uterine pregnancy while examining these cases. I think Dr. Gay is making a mistake when he tries to cast aside the symptoms I have mentioned, which are not difficult to remember, and tries to formulate in a brief way by saying that this condition may be diagnosed by pain, tenderness and a mass in the abdomen. What might not that be? I wish we could diagnose it so easily. The very last article I read in one of the journals before coming away referred to mistakes that had been made similar to those that have been related by my friend here. In conclusion, I think if we have our minds fixed upon this subject it is not such an altogether difficult matter to diagnose extra-uterine pregnancy.

Dr. Anna D. Varner: The importance of keeping the mind fixed on extra-uterine pregnancy was forced upon my mind last summer. I was called to see a case in consultation with another physician. He told me over the telephone the patient had peritonitis. I asked if it was septic. He said no; he thought it was due to cold. When I reached the house a few minutes later I found the woman in collapse. She died in ten minutes. This was on Tuesday. The history I obtained from the attending physician was that on Friday she had fallen in a faint, with severe pain in the abdomen and collapse. He treated her with medicines. In a few hours she rallied, and on Tuesday collapse came on again. I said to him, "You had ectopic pregnancy." He did not think the woman was pregnant at all. I said, "How do you account for this?" He said it

must have been cold and peritonitis. I said, "You had collapse. She had ruptured something. I think it is ectopic pregnancy." I am sure that is what it was. I think the younger physicians might overlook a thing of that sort, and I am sure if that woman had been operated on promptly on Friday, she would have lived.

DR. T. L. CHASE: It seems to me this point with most of us comes down to a very narrow one. That is, if we cannot make (and some of us cannot) a clear-cut diagnosis, we have to say that a certain condition indicates surgical interference, and that in any event the abdomen will have to be opened, whatever the nature of the condition

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REPORT OF THREE CASES OF CÆSARIAN SECTION.

THEODORE J. GRAMM, M. D., PHILADELPHIA.

It is probable that the Cæsarian section will ever awaken a lively interest. The operation is interesting intrinsically as an operation on account of its gravity and because there are usually two lives at stake; but particularly because of the startling suddenness that terminates a physiological process which in the minds of everyone has ever been associated with the idea of intense suffering during a protracted period of time. The conservative Cæsarian section may well be looked upon as the culminating achievement of modern aseptic obstetrics. No wonder that centuries ago an illustrious career was thought to be ordained for those highly favored few whose quite unnatural birth distinguished them above their fellow men. This thought is still transmitted in the name with which we designate this operation. The Cæsarian section was moreover in all probability among the first major operations suggested, though but vaguely to those who would aid the afflicted one in ancient and even in pre-historic times, only to be rejected with horror. To follow the history of this operation and to trace the progress of its development down to our own time is indeed a captivating pursuit. At the present time our interest centres mainly in the fact that with modern asepsis and the improved technique devised by Sanger, this operation in some cases robs obstetrics of its horrors and in a few seconds brings joy because a child is born, while formerly many

hours of anguish were spent in unavailing travail, with death ever threatening and often closing the scene; and by universal concession the death of both mother and child during childbirth is one of the most distressing occurrences within the range of human experience. Furthermore, craniotomy upon the living child, that disgusting blot upon our escutcheon, that hideous reproach upon the fair name of our art, can at last be cast aside as something unclean. It is true that to be able to do this has, through the centuries, been the heart's desire of our forefathers in medicine, even without being prompted by the enactments of pious men, but unfortunately prior to 1882 this was impossible. Symphyseotomy, also, devised by that distinguished Italian, so beautiful in theory and so destructive in its after effects, is in a fair way of being abandoned. As you doubtless know, its right to existence is now called in question, for they are debating whether this operation is based upon legitimate surgical principles.

It is my pleasure to offer as my contribution to this annual meeting of our Society the report of three cases of Cæsarian section operated during the present year.

The first case concerns B. J., an unmarried mulatto girl, nineteen years of age. During her infancy this patient suffered from rachitis, on account of which she could not walk until four years old. Puberty came on during the twelfth year of her age. The patient is a dwarf, showing distinct evidences of rachitis and measuring only fifty-two inches in height. She has a distinct left lateral curvature of the spine, the greater curvature in the lower dorsal region, where there is a pronounced thickening under the short ribs and involving them in a mass not further to be differentiated by palpation. The left iliac crest is one inch lower than the right, being thirty inches from the soles of the feet when standing erect, while the distance of the right crest is thirty-one inches.

The present is her second pregnancy. A year ago the first pregnancy was artificially terminated in a hospital at the sixth month of pregnancy and the patient says she was very sick afterwards. The menstrual period had lately been regular, the last one having occurred in the end of March, 1904. As this evidence of the stage of pregnancy did not accord with the physical signs elicited when first seen, further inquiry showed that she had not menstruated since being admitted to an institution on May 24, 1904. Quickening was said to have occurred on September 21, 1904. At this time the fundus uteri reached the level of the navel. From these unsatisfac-

tory data it was not possible to determine the stage of pregnancy with accuracy, but the end of pregnancy was tentatively estimated to occur not later than the 24th of February of the present year, and the date for the Cæsarian section was set for February 16, 1905.

At the obstetric examination the pelvic measurements were found to be as follows: Interspinous diameter, 8¼ inches; inter cristal, 8½ inches; external conjugate, 6 inches; the diagonal conjugate taken in the usual manner was 3½ inches; but since the sympysis pubis was unusually broad, the actual measurements of the available conjugate diameter were taken and amounted accurately to 2¼ inches. This measurement was obtained with remarkable facility by having the index finger touch the sacral promontory, while the extensor side of the thumb easily could be made to come into contact with the inner side of the symphysis pubis. On palpation the fœtal presentation was found to be cephalic, and probably in the left occipito posterior position, the fœtal heart sound being most distinctly heard five inches to the left of the median line and on a level with the umbilicus. The placenta was situated on the right side.

As above stated, February 16 had been set for the operation; but on the morning of the 13th the patient, while assisting the nurse in the kitchen, casually mentioned that the amniotic fluid had been discharged, and shortly thereafter labor pains set in. The patient was therefore at once prepared in the usual manner for the section.

On making the incision the abdominal walls were found to be very thin indeed, hence there was no difficulty in gaining access to the abdominal cavity. The large pregnant uterus was instantly encountered, lying in dextro-lateral rotation. The observation was also made that since the amniotic fluid had been discharged, and since uterine contractions had been in progress for about four hours, that the head of the child was lying firmly upon the pelvic brim and was causing a pronounced protusion of the abdominal walls just above the symphysis pubis.

The uterus was incised in the median line and at once there was a copious gush of blood, because the placenta was partly applied over the line of incision. The finger was therefore introduced into the uterine cavity between its walls and the placenta, and the latter separated so that the scissors could be introduced and the uterine incision increased to the required length. The portions of the fœtus first encountered were the hands and its right side, which lay directly in the line of incision, the child occupying, as previously

diagnosed, the left occipito posterior position. Passing by the hands, I seized the foot and delivered the infant, a female. After unwinding several coils of cord about the child's neck, two clips were placed upon the funis and the latter severed between them. While raising the child from the uterus and already before the face could be entirely lifted out, the infant began to cry, so that no efforts at all were required for resuscitation. Up to this point four and a half minutes had elapsed since the beginning of the operation. No difficulty at all was encountered in the birth of the placenta, and the uterine cavity was easily freed from shreds and clots. The uterine incision was closed by interrupted silk sutures, while that in the abdomen was closed with continuous catgut in the peritoneum and silk worm gut in the remaining layers. The dressings were applied and the patient returned to bed in an unusually good condition, having been upon the operating table just twenty-seven minutes in all. Of the subsequent treatment of this patient nothing need be said, since her recovery was quite uneventful. Milk appeared in the breasts at the usual time and in abundant quantity, so that the child could be easily nursed. At birth the child's weight was 6½ pounds. The size of its head was in every measurement that of the average child at birth, but the head exhibited the usual symmetry of an infant whose mundane advent had been *over* instead of *under* the pubic arch.

The second case was that of O. F., a mulatto girl of fourteen years. This small, frail and undeveloped child had been the subject of rape on October 18, 1904. The mental development of this patient was somewhat below par and quite puerile. Her height is fifty-eight inches. At the obstetric examination made at the time she was seven and a half months pregnant, it was elicited that she had reached puberty at the twelfth year of her age. Since then the periods had recurred with more or less regularity, continued about four days, and were attended by some pain in the lower abdomen. As above stated, the date of the rape and the only occasion of coitus was on October 18, 1904. The last menstrual period was in September previous. According to this, the date of her expected delivery was estimated to be July 25, 1905. The bodily outline of the patient was puerile and she had not yet attained the female type, her pelvis particularly appearing small. On palpation and auscultation the fœtus at this time was found to occupy the left occipito anterior position. The plevic measurements were as follows: Inter spinous diameter, 8 inches; inter cristal, 8¾ inches; external conjugate

diameter, 6¾ inches; the diagonal conjugate, 3 inches; the internal conjugate, 2¾ inches; the inter trochanteric diameter, 10 inches; the left oblique, 7 inches, and the right, 7½ inches. The fœtal head, measured through the abdominal walls, was estimated to be quite as large as the average child at this stage of pregnancy. The genitals of this patient were infantile, having the close approximation of the fourchette to the meatus urinarius, which characterizes that period of physical development. The introitus vagina was so small as to barely admit one finger, and the introduction of two fingers was impossible.

This patient was operated previous to the time originally estimated to be the end of her pregnancy, for on July 10, 1905, she was overtaken in labor, and was operated at once, after the usual preparations. It will not be necessary to recount the operative procedures in this case, since the technique was similar to that employed in the former case. A few points, however, merit attention. On account of the unusually short distance between the symphysis pubis and the umbilicus, it was necessary, in spite of my contrary desire, in order to obtain sufficient room to deliver the child, to lengthen the abdominal incision to an inch above the umbilicus. At the same time it was found that the uterus was remarkably elongated upwards, so that the only field presented for the uterine incision was rather low down upon the anterior wall of that organ. The uterine incision was, therefore, of necessity made much lower down than I would deliberately select in another case, and the hæmorrhage from the incised uterine muscles was somewhat freer than I have heretofore seen it. Another condition causing some momentary embarrassment was the fact that the bladder was found well up out of the pelvis, having been drawn there by the uterus in its upward development, and the bladder also contained quite a quantity of urine, which had to be withdrawn by the catheter, although the patient had been catheterized just before beginning the anæsthesia. The amniotic fluid was quite scanty in amount. The child, a female, was found lying in the position previously diagnosed, and was delivered in the classical manner advised. In this case the placenta and its membranes were more firmly adherent to the uterus than I have previously seen them, and it became necessary to examine closely for the line of separation; a rather free hæmorrhage also attended the placental stage. On this account Ergotol was administered hypodermically as a prophylactic. A dilatation of the cervix suffi-

cient for the purpose of drainage was revealed while freeing the uterine cavity from clots and membranous shreds; so the operation was terminated in the usual manner, except the application of the uterine suture. This was carried out with great care by first placing a row of silk sutures, passing through the uterine wall but not including the mucosa, and this row was then fortified by a series of superficial silk sutures between the deep row. I might say that this procedure prolonged the time of the operation considerably, but seemed to be justified in order to overcome the risk arising from the necessarily low incision. As above mentioned, the patient had to be cateterized during the operation, and this also entailed the loss of some minutes; but after deducting this time, three and a half minutes were required for the delivery of the child, and the patient was upon the operating table forty-three minutes in all. The infant, a female, weighed five and a half pounds immediately after the operation. I was interested in the size of this child's head in view of the indications for the Cæsarian section in such cases, and consequently measured it with great care. The measurements of the several diameters of the fœtal head were those of the average child at birth. The child's body, however, was somewhat smaller than usual, and this accounts for its small weight. The condition of the patient subsequent to the operation was good, and her recovery unimpeded except by a rise of temperature absolutely unassociated with any evidences of infection, but attended by some gastric disturbance induced, without doubt, by some beef broth given during the end of the first week of the convalescent period.

The third case of Cæsarian section to be reported at this time, and the fifth which I have had occasion to operate thus far,* is that of M. H., white, 35 years old, nullipara. She is fifty-seven inches in height. Her physical development is imperfect, and mentally she is also deficient. Puberty occurred when eleven years old. According to her statement she menstruated last on March 20, 1905, but if this be true she menstruated several times after conception. At the obstetric examination the child was found lying in the right occipito posterior position, and the head projecting forward over the pelvic brim. The cervix was small, and located high up in the pelvis. The pelvimeter showed the following measurements: Inter spinous diameter, 10 inches; inter cristal, 10½ inches; external con-

*See Transactions of the American Institute of Homœopathy, 1899, p. 625

jugate, 6¼ inches; diagonal conjugate, 3 inches; true conjugate, 2½ inches.

On the evening of August 18, 1905, I was informed that the patient was having slight labor pains since the previous night, at very long intervals. On the following morning the pains were about a half hour apart, and not very severe. On vaginal examination the cervix had disappeared, and the os was dilated about three-quarters of an inch. At the time the Cæsarian section was undertaken the patient had been having labor pains about thirty-six hours, and while they had effected a dilatation of the os to the extent indicated, the fœtal head had not entered the pelvis at all, but lay upon the pelvic brim, and projecting anteriorly, with the right parietal bone trying to enter the pelvis. The abdomen was opened in the median line through exceedingly thin abdominal walls, and the place for the uterine incision carefully selected so as not to be placed too low. When the unruptured fœtal membranes were reached they appeared yellowish instead of bluish, as in my other cases. The infant, a male, was extracted by the feet. In this case the child did not cry on being delivered, but was white and breathless, and gave the nurse some little difficulty to resuscitate it, but this was ultimately accomplished. Several factors may have been conjointly operative in producing this condition. On beginning the ether anæsthesia the patient had considerable bronchial irritation, shown by a constant short cough with much mucus in the air passages, necessitating a slow anæsthesia. Furthermore, the patient had been allowed to have labor pains for thirty-six hours before the operation, and these ineffectual pains, while not severe, had been expended upon the head, distorting it considerably by forcing it upon the pelvic brim. The placenta was attached to the left upper part of the uterus, and was delivered without any difficulty. The accompanying hæmorrhage was, if anything, less than that attending a normal birth. Two rows of interrupted silk sutures were applied in the uterine walls. During their introduction the uterus contracted with great rapidity. Seven minutes elapsed in this instance until the delivery of the child, and twenty-five minutes until the closure of the abdomen. The weight of the child was seven pounds, and it was estimated to have been born about two weeks prior to the end of normal gestation. The recovery of this patient has been entirely without incident.

There are so many points relating to this interesting operation of

the Cæsarian section which invite attention, that the time limit for this paper would be greatly exceeded if even an incomplete consideration be given them, and consequently it is necessary to pass by all of them, excepting two, which have a distinct concern for those engaged in ordinary obstetric practice.

Indications.—The indications for the Cæsarian section are said to be *absolute* and *relative*. As succinctly stated in the American Text-Book of Obstetrics (p. 918): "The indication is absolute when it is impossible to extract the fœtus, either living, dead or mutilated, through the natural passage. This may be the case in extreme pelvic contraction from arrested development, rickets or osteomalacia, or where the passage is blocked by tumors of the pelvis (osseous), or of the uterus and the soft parts (carcinoma, fibroma, etc.)." Without going into a detailed discussion of the indications based upon measurements, we may accept the statement of Kelly* as approximately representing the views prevailing among operators to-day. He says: "The indication is absolute, and the Cæsarian section must be performed when there is a living child in a flattened pelvis with a true conjugate diameter of 6.5 cm. (2⅝ inches) or less, or in a generally contracted pelvis of 7 to 7½ cm. or less. . . ."

In respect to the *relative* indication, as the former authority states, it is difficult to formulate them, and they must generally be determined by the individual peculiarities of the case. A degree of pelvic contraction or obstruction less than is requisite to constitute an absolute indication, but yet sufficient to make the safe delivery of a living and viable child by the natural passages doubtful, may be considered a relative indication. A conjugate of 6 to 8 cm. (2 2-5 to 3 1-5 inches) and tumors of the pelvis or of the soft parts causing moderate obstruction are the commonest relative indications.

So also v. Braun-Fernwald says: "In reference to the relative indications dependent upon the measurements of the conjugata vera as indication for undertaking the Cæsarian section, they cannot be readily fixed. It depends upon the form of the pelvis and its size, as also upon the relative size of the child and the firmness of the head, and particularly upon the activity of the labor pains; besides in multiparæ the history of previous births must be considered." Leopold accomplishes good results with version and extraction in the

*Kelly: Operative Gynecology, Vol. II., 415.

Walcher position with 7 cm. (2 4-5 inches) for that rachitic pelvis, and 7½ cm. (3 inches) in generally contracted pelvis; but adds that these limits cannot be accepted as fixed, since in each case the question must be specially decided. V. Braun-Fernwald admits not having had favorable experiments with such small measurements. This difficulty of accurately fixing the relative indications according to pelvic measurements can readily be appreciated by those familiar with the practice of pelvimetry.

THE TIME TO OPERATE.—In ancient times the Cæsarian section was performed immediately after the death of the mother. In recent years, since the antiseptic method has given preponderating chances of success to surgical intervention in abdominal diseases, and even after the improved technique of Sanger had made the operation not only a justifiable but an imperative measure in the fulness of the practice of the obstetric art, the belief prevailed that it was necessary to await the onset of labor pains before this operation could be undertaken with safety. Conformity with this belief gave rise to some amusing occurrences and was often associated with much inconvenience to operators, and occasioned not a little risk to the patient from incomplete preliminary preparations. After a number of operators, however, had ventured to pin their faith to the unchangeableness of physiological processes, daring to operate in the absence of pains, and had good success, it became evident that the advent of labor was not a prerequisite for a successful Cæsarian section. On the other hand, while it is true that the uterus contracts even after being suddenly emptied, and the woman does not die from hæmorrhage as was formerly feared, yet it probably is better to operate after the pains have begun,[1] not in order to avoid fatal hæmorrhage, but in order that contractions may have operated in some measure upon the cervix and os uteri, and have effected a certain amount of dilatation commensurate with safe drainage for the lochia.

Now a word in regard to operating cases which have been in labor a longer time than above indicated. Knowing as we do the great likelihood of infection in cases of prolonged labor, we cannot expect the patient to have the same chances of unimpeded recovery under these circumstances. The patient should have been examined as little as possible, and only with aseptic hands; for, if infection has taken place, there is presented one of the indications for the Porro instead of the conservative operation, which, notably, is attended by

greater risks. Indeed, v. Braun-Fernwald believes it is not justifiable to do the conservative Cæsarian section after other attempts at delivery have been made, and he cites some evil results in published cases where this was done.

He, therefore, believes it is requisite that the woman should have no material rise in temperature and pulse rate. On the other hand, he does not require that the waters shall still be retained or have been discharged but a short time before the operation. He has operated twelve cases in which the membranes had ruptured from two to nine hours before the operation, and in one case fifty hours had elapsed. In the latter case there had been some rise of temperature, but just before the operation the temprature was only 99.5°.

Zacharias,* in writing about cases at Menge's clinic, also advises that all other attempts at delivery should be avoided, and no internal examination should be made before operating. Veit takes his cases into the hospital three weeks prior, and advises not to make any attempts at premature delivery. Such, then, are the views of quite a number of operators concerning this point, and many more could be quoted. You will notice that these recommendations are based upon the idea of avoiding infection, and are in accord with the very latest views of obstetric practice in general.

In this connection a recent article by Voorhees, of New York,* is of interest. He has reported seven cases of Cæsarian section. In one of these cases he made an unsuccessful attempt at delivery by means of the modified Champetier de Ribes balloon, four days before, and then operated the woman successfully by the conservative operation. He says many obstetricians would have ruled out the Cæsarian section for fear of sepsis. In another case labor was started with the balloon and then the conservative operation performed. On the eighth day a stitch abscess developed at the lower end of the wound. On the thirteenth day hysterectomy was done, at which time the uterus showed no signs of suppuration, and only localized peritonitis about the uterine and abdominal wounds. The patient died thirty-six hours later of pyæmia, which he believes resulted from the stitch abscess, or possibly from pervious meningeal trouble during a former pregnancy, at which time the patient was

*Arch. f. Gyn., Bd. 78, 509.

*Amer. Jr. Obs., Vol. LII., 161.

insane. It is probable that no one not having a full knowledge of all the circumstances of this case is competent to judge it with certainty, and yet these cases deserve consideration in connection with the point under discussion. In a third case labor pains were induced with the balloon, and, later, by the use of a bougie. Two days subsequent to the onset of the induced labor the conservative operation was performed. The patient did well except that she had some intestinal paresis for forty-eight hours, and also had a dry pleurisy from pulmonary infarct. Voorhees, furthermore, definitely states that in some of these cases we must take the chance of infection, for the patient must be given the test of labor, he says. This subject cannot be discussed at present, but after what has been said it seems after all to be the safer plan whenever possible not to precede the conservative operation by any other attempts at delivery. This leads me, in conclusion, once more to urge upon all engaged in the practice of obstetrics the adoption of the preliminary obstetric examination, as a route procedure, and especially its most important feature, namely, pelvimetry.

DISCUSSION.

Dr. T. L. Chase: Dr. Gramm's paper brings before us a very important subject, the use of the pelvimeter in all cases of primipara and in all cases of multipara if there is any history of dystocia. I have had an experience in two instances that will bear out Dr. Gramm's advice. One of these was a case sent into the hospital, of a woman 25 years of age, who was pregnant for the first time, and as usual, not having any pelvimeter practice, because it is seldom performed at the presetn time, excepting by those who are connected with hospital practice, and use the instrument as a routine measure, pelvic measurements were not made. This woman visited her doctor and said that her time was up at a certain date, and that fœtal movements had ceased. He examined her and decided that the child was dead in utero. He proceeded to put her in position, and using the small cervical dilator, attempted to dilate the cervix, after which he inserted his hand into the vagina and felt a soft mass, which was bleeding freely, and made a diagnosis of placenta praevia. He packed the woman with iodoform gauze, sent her to the hospital, and telephoned for me to meet the case there. I went down, and upon putting this woman on the table, prepared her

aseptically for examination. The moment I removed the gauze there was a gush of blood. I put my hand in quickly, and the first thing I came in contact with was a coil of intestines. In other words, this physician had used the small dilator, and dilated the cervix, tearing through the base of the broad ligament, severing large blood vessels, causing terrific hæmorrhage, mistaking coils of intestine for placenta prævia. In this case the child had been dead three weeks. We did a Cæsarian section. To show the desperate character of some of those cases which still recover, when I opened the abdomen and attempted to deliver the uterus through the incision, my fingers, merely from that pressure, went through the uterus. The omentum was gangrenous, necessitating the removal of three-fourths of its extent, which is a very serious undertaking. The woman had a pulse of 156 when she left the operating table, but slowly recovered. Another case sent in shortly after that was one wherein forceps has been applied, and failed in delivery. Two other physicians were called in. They both applied forceps, which slipped, whereupon they sent her to the hospital. I made an examination under an anæsthetic, introducing the hand into the vagina, and found an exostosis of the pelvis that would measure 6 cm. one way and 4 cm. another protruding out into the cavity of the pelvis 2½ or 3 cm. This case also was delivered by Cæsarian section, but died, showing that if the proper preliminary precaution had been taken recourse to the serious measures, which were at this time required, would not have been necessary.

THE HOMŒOPATHIC REMEDY IN GYNÆCOLOGICAL CASES.

D. C. KLINE, M. D., READING.

It would seem quite unnecessary for me to attempt to demonstrate or argue to this assembly the truth of Homœopathy, as it is an established fact that drugs prescribed according to the Law of Similars will cure disease of the body, and as the circulation of the blood extends to all organs and tissues why should we not be able to conquer disease in one organ, or portion of the anatomy, as readily as in another?

If a patient calls upon you suffering an attack of bronchitis, or you are called to one bedfast with pneumonia, another with hepatitis, or, again, with gastritis, or even with meningitis, you do not suggest or consider for a moment the prudence or wisdom of removing the bronchi, lungs, liver, stomach or brain to remedy the disease and suffering. You would likely sit down and examine your patient carefully, methodically, and then begin to hunt for the similimum.

In gynæcological practice we have all grown somewhat indifferent, or careless, about the Homœopathic prescription. In the hustle and hurry of our busy life we too often fail to exercise the great care in prescribing for disease of these organs as we would for a similar condition in other organs of the body, hence, too often do we readily advise and insist upon some manner or method of operative measures.

This is the day of "fads and fancies" in the practice of medicine. There are so many side lines of treating the sick at the present time that indeed it is a serious question whether the medicinal treatment of disease will not eventually be relegated to a second or third place. True it is that the medicinal treatment should be assisted by all hygienic, dietetic and other means of help; but we must watch carefully in order to retain our present position, for the human mind is wonderfully peculiar in its mode of action and ever ready to grasp a new theology or a new or varied method of treating the sick.

Note, if you please, the wonderful growth in the acceptance of so-called "Christian science," which really amounts to psychological treatment; again, the osteopathic method of relieving the sick body, which seemingly does not vary so much from massage, electricity in its various uses.

And then the vibrator method and various other forms, any way, or some way to equalize the circulation, whether it be by psychologically influencing of the mind and nervous system, thereby controlling the circulation, or by some mechanical means, aiding in the restoration of a normal body.

All methods seem to prove partially beneficial, hence, have numerous adherents, therefore, it behooves us to keep ever on the alert, constantly, painstaking, if we would maintain our present advanced position of treating the sick by the Homœopathic system of medicinal treatment.

This lack of care is not alone prevalent in the Homœopathic ranks,

but probably even more manifest among our old school friends, as I am under the impression that many of their capable and successful physicians rely almost entirely upon less than half a dozen different prescriptions in their work for any and all varied or variable patients and diseases.

Of all methods or modes of treating and curing the sick, none other can compare favorably with Homœopathy. It is the most scientific and successful means of relieving and curing the diseased body that the human mind has ever yet advanced or promulgated. It is a scientific law, and just as applicable in the treatment of disease of the generative organs as it is to other organs of the body; hence, to be a gynæcologist in the full sense of the word means that you should be capable of prescribing just as accurately for disease in that line and expect just as good results from the Homœopathic prescription as does the heart or lung specialist in his line.

When the general practitioner calls in a chest specialist or consultant, he not only looks to him to diagnose the difficulty his patient is suffering from, but he wants him to name the treatment that will relieve the patient. Thus, when that practitioner calls in a gynæcological consultant, he looks, first, for him to make a careful and accurate diagnosis, and secondly, to outline the very best, easily applied, scientific mode of overcoming the disease. Therefore, the consultant should be fully versed and informed upon the applicability of the Homœopathic drug, and where it is possible to effect a cure by medical treatment, to do so. If the disease is too deep-seated for a cure to be effected by the carefully selected Homœopathic remedy, or the pathological changes in the organs or tissues too great, then, and only then, should operative measures be considered and instituted.

In other words, the gynæcological specialist should be first and foremost, a good, competent Homœopathic prescriber for gynæcological diseases, and also ready and capable of instituting whatever surgical procedures are indicated.

There are many instances, of course, where it is the height of folly to attempt the restoration to health by drug action; this would be equally undesirable and as much to be deplored as the other; but it is the "middle of the road" that we urge. Use an instrument, remove an organ only when the remedy will not effect the cure. Be a physician first, a surgeon next.

If a congested or inflamed lung can be relieved or cured by the

Homœopathic prescription, why not an ovaritis, salpingitis, endometritis, metritis, cervicitis, or vaginitis? Perhaps not quite so readily, but methinks it is many times due to the fact that we are not sufficiently painstaking, do not differentiate and individualize our cases as carefully as we could, should or might do.

As we have previously stated, each case must be individualized and the similimum selected. But allow me to call your attention to just a few remedies that are applicable for the various gynæcological ailments, or diseases, as in the diseases of the

OVARIES.

Apis mel. is exceptionally useful, particularly in enlarged and painful right ovary. Here, also, we find Bella stands well, especially with downward pressure, and pains come and go suddenly.

Bryonia; here the ovary is sore to touch or pressure; particularly useful if accompanied with rheumatic pains, as is also Rhus tox. Hamamelis following injuries, inflammation develops after a blow; Lachesis, Lycopodium, Cimicifuga, Colocynth, Sepia, Sulphur, Thuja, are all valuable and serviceable when properly indicated.

IN ENDOMETRITIS AND METRITIS.

We often find Hydrastis one of the most useful remedies, weak, sickly, cachectic appearance of the woman, digestion is poor, with diarrhœa or constipation, ugly leucorrhœal discharge, which is tenacious, sensitive and ulcerated cervix.

With *Kreosote* the uterus is heavy and dragging, dirty, yellow, thick leucorrhœa, which corrodes the vulva and stains the linen, making it stiff, difficult to wash out, decidedly offensive odor. The last named symptom is also characteristic of *Nitric acid.* Kreosote is often useful in malignant conditions of the uterus.

Lachesis furnishes us a deep acting remedy; patient here is exceedingly sensitive over uterine region, always worse after sleep. Especially useful during the menopause.

Arsenicum, Sepia and *Sabina* are remedies we must not overlook in these inflammatory conditions of the uterus.

Secale cornutum should be thought of, particularly where subinvolution exists, uterus is heavy and drags down, accompanied with leucorrhœa.

In uterine hæmorrhages we should not follow the universal custom of our old school friends and think only of *Ergot*, as we have numerous remedies that are highly beneficial, not only for temporary relief, but permanently curing the patient in a large majority of instances. Take, if you please, *Arnica*, after a fall or injury, pain in small of back, head hot, extremities cool. *Bellodonna;* flow is red and hot as it passes the vulva, throbbing headache, full pulse, often useful after labor.

Again, we have *China*, where there is atony of the uterus, spasms of uterus, when patient has lost considerable blood and there is marked debility.

Ferrum, profuse hæmorrhage, black, thick blood, patient's face is red, showing vascular excitement, or blood may be bright red and thin. *Hamamelis* comes in where there is anæmia and passive hæmorrhage, blood is dark; a marked characteristic is that the flow ceases at night, but appears again next day.

In *Ignatia* we have a wonderful remedy for those nervous women who sigh and feel that they must cry.

While in *Ipecac* we always find that predominating symptom of the drug, nausea, or possibly, vomiting and gushing of bright, red blood; especially useful after childbirth or miscarriage.

Thus we might go on with Sabina, Millefolium, Trillium, and hosts of others without exhausting this great storehouse of knowledge.

Again, in that worrying class of patients, especially young girls, who are so frequently annoyed with that condition of vicarious menstruation, we look for Pulsatilla, if the patient be of that mild, tearful, yielding disposition, or *Bryonia*, with stitching pains in lower abdomen, increased by the slightest motion; *Digitalis*, where the heart symptoms are pronounced; then, too, we find *Sanguinaria* useful where there is intense headache, face red and hot.

Let us not forget that in the ready use of the Homœopathic prescription lies the strength and future existence of our school.

DISCUSSION.

Dr. T. J. Gramm: I would not like to see that paper go by without at least a word of discussion, inasmuch as I feel from my experience that of all specialists, I think that those who practice gynæcology are giving the most close attention to the administra-

tion of Homœopathic remedies. I have followed, since I have been in the practice of a specialty, a suggestion which was made by my friend and teacher, Dr. Betts, years ago. He said we should make up our minds what the remedy is, or likely to be, in other words, make an attempt at defining the remedy before we make a physical examination of the case. That is my habitual practice.

CANCER OF THE UTERUS.

N. F. LANE, M. D., PHILADELPHIA.

This paper is intended to act as a reminder of things we already know, and is not intended to advance anything particularly new.

We all *should* know that cancer is one of the common gynæcological diseases that we have to treat; we all *should* know the symptoms of the disease; we all *should* know that treatment, to be of any lasting benefit, should be given very, very early; and yet, are there not some among us who at times get careless and allow our patients to drift along during the early stages, neglecting to take note of certain symptoms that should alarm us and call for prompt investigation, until the patient is beyond all reasonable hope for permanent or even much temporary assistance.

It is this thought that prompts this essay; a feeling that we do actually at times become careless in the matter of diagnosis, prescribing symptomatically, and letting it go at that. There may be some maladies that can be treated by medicines without making other than a tentative diagnosis, but there are others where the diagnosis is of the first and utmost importance, and cancer of the uterus is one of these. In fact, an honest effort at diagnosis should be made in every case of illness we are called upon to treat.

Those among you who are doing much hospital or dispensary work, know that you frequently get cases of uterine hæmorrhage that have been treated by medicines, under the impression that the bleeding was due to the menopause. Fortunately, the laity are beginning to understand the possible significance of menorrhagia and metrorrhagia, and the matter of cancer may soon become like the present status of appendicitis; the patient often making the diagnosis before the doctor is called.

I believe in our medical work we occasionally need a good shaking up, and this is perhaps the more necessary the more common the disease, and as long as uterine hæmorrhage is treated without an effort at diagnosis so long will papers like this be in order. The foregoing is my apology for inflicting this subject upon you.

The etiology of cancer is obscure, and unless one is doing some original work along this line it is hardly worth while to discuss it. For the present, we can all think as we like.

Of the varieties of cancer with which we come in contact the most common are the squamous celled carcinoma attacking the vaginal cervix, the adeno-carcinoma attacking the cervical canal and the fundus. The symptomatology of the first two varieties is often, unfortunately, very meagre, thus giving us less chance for early interference. The one fairly constant early symptom is vaginal discharge consisting of a leucorrhœa with more or less hæmorrhage. This leucorrhœa, accompanying all varieties, is inclined to be watery and irritating, and of an offensive odor The bleeding in the squamous-celled variety at first usually follows some mechanical violence, such as coitus, or after the introduction of the nozzle of a syringe. Later, the bleeding becomes more constant and is not dependent upon mechanical interference.

The cervical varieties of cancer do not affect the menstrual period, as does the adeno-carcinoma of the fundus.

Here the menstruation is inclined to be prolonged and profuse. Cancer, when attacking the fundus, is accompanied frequently by severe pain even in a comparatively early stage. The early symptoms, as before stated, are confined practically to abnormal vaginal discharge in the form of leucorrhœa or an irregular bleeding. This bleeding is associated in the mind of the patient with the menstrual function, and as she expresses it, "My menses are too frequent, irregular, or profuse," or if she be past the menopause, she says, "My menses have returned but are irregular." We cannot depend upon pain as an early symptom; the patient being usually beyond help when this occurs, excepting in cases attacking the fundus. We must depend, therefore, upon a metrorrhagia as our guiding symptom, and insist upon an investigation as to the cause of every case, if we expect to get our cancer cases early enough for radical operation, which is their only hope of cure. Even this symptom is often, unfortunately, too late to be of value.

The diagnosis in the majority of cases is a simple matter for the

reason that we usually get our patients in an advanced stage of the disease. When seen early, the diagnosis is sometimes by no means simple, and we must consult the histologic pathologist for the help his microscope can give us. Probably the condition most likely at first glance to be mistaken for cancer of the cervix is a cystic degeneration with lacerations and eversion of the cervical mucous membrane, giving us the so-called erosion.

This condition feels not unlike a cancerous infiltration; but upon careful inspection the Nabothian follicles will be seen and a puncture of these nodules and escape of their contents will determine their nature, although this need not necessarily throw out the element of malignancy. The proper treatment of such a condition will soon prove that it is not malignant. An ordinary erosion alone is sometimes very like a beginning cancer, but the application of Churchill's tincture of iodine will soon temporarily cure the erosion. These erosions do not bleed as readily as cancer, and their feel is different. This peculiar feel of cancer is hard to describe, but perhaps it may be compared to the difference in feel between a piece of rough and a piece of glazed paper; the former representing the cancer, and the latter mucous membrane.

These and other points of difference may be brought out, but they are only points of interest, and for all practical purposes we must usually submit a portion of the suspected tissue to a competent microscopist.

One word only in regard to the diagnosis of adeno-carcinoma of the fundus. We should always bear in mind the fact that the disease can be far advanced, the cavity perhaps filled with the growth, and still be little enlargement of the organ. We should be prompt, therefore, in all suspicious cases to curette the uterus, and in all doubtful cases refer to the microscope to determine the nature of the disease present.

The prognosis, as far as *permanent* cure is concerned, is bad in cancer of the cervix unless seen *very* early during the microscopic stage, and we seldom get them so early.

The cancer attacking the fundus is more favorable if seen in the earlier stages.

The treatment is essentially surgical; if seen early, curative; if seen late, palliative. The pain of the very late stages will usually have to be controlled by medicines, like morphia. If the growth attacks the cervix it is suitable for radical operation, providing it

has not spread to the vaginal walls and has not infiltrated the broad ligaments at their bases. This infiltration of the broad ligaments is sometimes confused with an old inflammatory condition of the tubes with adhesions. There need seldom be any doubt in this matter, if we remember that the cancer infiltration is greatest at the cervix, is continuous with it and gets less the farther we get from the cervix; while the inflammatory condition should be the reverse, with a distinct sulcus between the mass and the cervix. Cancer of the fundus should be subject to radical operation if the growth is confined to the uterus and even when it has invaded the peritoneal covering, the uterus should be removed providing the intestines are not adherent and invaded with the growth. These late operations may not much prolong the life of the patient, but will often relieve the severe pain. Of course, permanent relief from pain cannot be promised. The operation that gives the best result is still unsettled. Some advocate abdominal hysterectomy for all varieties of uterine cancer; others advocate the vaginal route, and still others would operate cancer of the fundus by the abdominal method, and of the cervix, by the vaginal method.

Personally, I have come to avoid the opening of the abdomen of *very* stout women if the vaginal route is at all feasible.

Gynæcologists have been much disappointed over the results of the complete radical abdominal operation with removal of the pelvic glands. Theoretically, like cancer of the breast, it should give the best results, but after a trial of some ten years it is conceded by nearly all that there is little if any advantage to be gained, and as the operative mortality is immensely increased, it has been abandoned by many. The best results seem to be attained by as complete a removal of all local or adjacent tissue as possible. If the glands are involved, the case is hopeless.

Next in importance to the curative operation is the palliative operation with local treatment of the diseased structures and the medical treatment.

The principle of the local treatment is to rid the patient of bleeding, discharge, odor, and absorption of septic material. This is usually best accomplished by a thorough curettage, followed in some cases by the actual cautery, and this curettage requires in some instances all our skill.

We wish to remove all broken down tissue so as to get a clean base, and at the same time we must be extremely careful not to

enter the bladder, rectum or pelvic cavity. The natural course of the disease may do this; but it is an unpleasant result of an operation intended to make the patient more comfortable.

The curettage can be repeated during the course of the disease if necessary, or after once having obtained a clean surface it may be kept so by the occasional application of a mild caustic, thus producing a slough of the broken down tissue. Monsels's salts can be applied for this purpose, as can also twenty-five to fifty per cent. solutions of chloride of zinc on pledgets of cotton, care being taken to protect healthy parts from its action. Other methods can be employed; but all are directed to the same end.

Antiseptic vaginal douches can be used to reduce odor and discharge, among the best being permanganate of potash and peroxide of hydrogen.

In conclusion, I wish to reiterate that the object of this paper is to stimulate all to make a diagnosis in cases presenting themselves with uterine hæmorrhage, especially if it be at, or about, the cancer age, and I wish all could read the section of an address by J. Knowsley Thornton before the British Medical Association, July, 1895, and quoted by Cullen, in his work, "Cancer of the Uterus." Although this address was delivered ten years ago, I think it still expresses the feelings of the modern gynæcologist upon this subject.

MAMMARY TUMORS UNDER MEDICAL TREATMENT.

JULIA C. LOOS, M. D., H. M., HARRISBURG.

SCOPE AND PRINCIPLES.

The scope of this discussion does not include local treatment, with antiseptics or medicaments of any sort, applied either externally or by injection. The Alexander treatment is far from its consideration. It purposes to deal with the progress of mammary tumors when the patient is under rational medical treatment, *i. e.*, the local result of putting the system in order, leaving tissue changes to the care of orderly vital action.

No apology is offered for treating the matter purely from the

ground of the basic principles of Homœopathy. The stand is taken, with Hahnemann, that these principles must guide in the treatment of the sick or injustice is done the patient, and the physician has missed the aim of his mission.

Disease is disorder in the controlling force of the economy expressed by disordered functions. Symptoms are external expressions of internal disorder, subjective or objective. All activities of life operate from within out, hence no outward manifestation is the beginning. The externals of the body express the first developing symptoms, and as disease progresses (especially if the external manifestations are eradicated, without internal restoration to order) symptoms are expressed more internally. Expressions of disease progress from without in. In the course of cure progress of symptoms is from within out. The most internal of man is the most vital, and thus protection is afforded the life.

When tumors develop in the breast it means simply there is disorder within. The tumor is not the first, it is not the sickness. It has developed because the controlling force has not regulated tissue formation here and abnormal growth is the result. Accidental bruises from blows, or continued pressure on the glands, are but inciting, contributory influences, which develop disordered activity. If the patient were in order these bruises would be healed from within.

The tumors developed because the patient is sick, they cannot make the patient sick. In this connection the *subkatabolism explanation of Dr. Homer Wakefield, N. Y., is interesting. Herein we see, that, with other principles of Homœopathy ocasionally advanced, the "regular" school is advising to get back of the disease to consider the patient.

We may dispose of the tumor, to be sure, but the disorder continues, if treatment neglect that, and it will be expressed elsewhere. The natural selection was a site, safest for the economy. If that expression be checked, even more, if the entire mamma and surrounding glands be removed, while the disorder within be not corrected, it is an injustice to the economy. The burden of bearing the disease expression is thrown on some other part, more internal,

*"Pathology of Katabolism in Relation to the Etiology and Pathology of Cancer," published in Amer. Medicine, November, 1902. Reviewed by P. W. Shedd, in Medical Advance, March, 1905.

when the originally affected tissues are removed or stimulated to resistance. Herein lies the tremendous objection to surgical measures, X-ray treatment, and local medication in these troubles. Although, for a period, the patient may seem relieved, while a readjustment of the economy takes place for a new localizing, the day of reckoning is merely postponed.

Consideration of "the patient as a whole" paramount to the disordered expressed and "individualization of patients" are two considerations necessary to the application of the law "Similia Similibus Curantur." In the midst of other demands and notions, when surgeons and specialists proclaim abnormal tissue growth a menace to the victim; when operations and special treatments are so common that every community has its heroines of this sort; when every woman with a tumor in the breast has friends who echo the shouts of such enthusiasts, to oppose them all and persistently follow a steady course in a different line may take some backbone and courage, but it brings its reward in the ultimate progress of the patient.

SELECTION AND ACTION OF THE REMEDIES.

In each case the remedy selected is that of which the image is presented in the totality of characteristic symptoms of the patient as in any other affection or disease. Sometimes there is extra difficulty in making this selection, because the women may say they are perfectly well in other respects. Their minds are so impressed with the lump in the breast that everything else is dwarfed. Careful investigation, however, will usually bring forth enough of characteristics to lead to the remedy which the patient needs.

The first result of the use of the remedy, Homœopathic to the case, is the general good feeling of the patient herself. She may be unable to define any particular, or she may enumerate several points of distinct improvement. This general relief and buoyancy is a certain sign of a wise prescription. D. C. McLaren, of Ottawa, has stated that he has frequently noticed "in the treatment of tumors that when the remedy begins to exercise its curative influence one of the first signs of it is the breaking out of a severe cold with profuse coryza and much expectoration. During such an attack the size of the tumor will diminish very rapidly. After the administration of the remedy for the internal treatment of a tumor a bad cold is a very favorable sign, and the cold so developed should

not be treated." This is an example of the development of symptoms from within out, in the course of cure.

Coincident with internal good feeling and development of superficial symptoms, there is relief of pains and discomforts in the breast, if there have been any such. The burning, stinging, sticking, drawing, soreness, etc., and unusual consciousness of the part gradually disappear.

CHANGES IN THE TUMORS.

1. If the tumor be a superficial one, not involving the mammary gland, it may withdraw more unto itself, separate from the surrounding tissue and suppurate out as a foreign body. The wise physician will be careful to keep hands off and not meddle, further than to cleanse away the pus that discharges, keeping free passage for it after an opening has formed *without external assistance.*

2. If the tumor, large or small, involves the gland, even if quite firm and hard when treatment is begun, when internal order is restored there will be gradual softening to normal consistence or gradual reduction in size of hard nodules and subsequent loss of firmness.

3. If there is present that dreaded feature, retraction of nipple or skin over the tumor, the drawn appearance quietly disappears, and after awhile there simply is no retraction while softening progresses.

4. When the tumor has already ulcerated and presents an open surface, pouring forth the offensive, ichorous discharge which demands constant dressing and cleansing, there is also a marked cachexia in the patient. These cases may keep the physician busy selecting remedies, the influence of each lasting but a short time, with symptoms changing to picture the image of another. Even in such advanced cases, under remedies well selected, always on the basis of the patient's characteristics, the discharge becomes less offensive, less acrid, though copious; the involvement of surrounding tissue will be limited, while local pains are relieved or wholly annulled. The patient, even with an open, ulcerated breast, will experience that general relief which becomes a euthanasia when cure is impossible. The end, then, is through a period of increasing weakness, perhaps more discouraging than pain but less distressing to patient and friends.

In those cases where malignancy has developed before Homœopathic treatment is begun malignancy is checked. In those cases where this feature is not present, it cannot develop after the patient is turned to order internally, for malignant development and internal order are incompatible.

CURES IN LITERATURE.

Some will say, with strong emphasis on the "if," "*If* these results are possible, why are there not more of them recorded in literature, text-books and clinics?" The answer is deplorably easy. There is not more evidence of the influence of medical treatment in these cases because professors and students have been ensnared in the wild clamor after surgery and fads, which have blinded many to the truths of the philosophy Hahnemann established. Instead of being trained as disciples of Doctrina Homœopathicorum, the royal princess of cure, they are steeped in ambitions to obtain quick local effects irrespective of healthy processes. Materia Medica comprehension is discouraged, while the power of remedies and value of principles are denied. The most notable literature on the subject in included in J. Compton Burnett's "Curability of Tumors."

I have found in reports of society meetings* a few cases from the practice of reliable Homœopathic physicians, which may be briefly cited. One of these, L. B. Wells, says: "I could give many others with similar results. I would earnestly persuade my colleagues to treat these cases with the same confidence they do other diseases, and not turn them over to a surgeon, who would resort to knife or cautery."

It has been my own privilege, in the past eighteen months, to treat four of these patients with interesting results, as noted below.

REMEDIES.

What remedies can be relied upon for such results? Any remedy, the image of which is presented in the patient's characteristics, will turn her into the track of repairing disordered nutrition. Some-

*Proceedings of International Hahnemannian Ass., '84, '85, '86, '93, '95, '97, '98, '99, '01

times but one remedy is needed. In other cases the first selection helps the patient and prepares the way for another, which completes the work, under which the local trouble is eradicated. Repertories give short lists of remedies that have developed nodules or indurations in the glands, but others may be as useful, although this feature of their action has never been noted. To gain good results it is required to find the remedy corresponding to the patient afflicted. This is applied Homœopathy.

CASES IN ILLUSTRATION.

1. A patient of sixty-three years of age (under treatment for more than two years for chronic troubles with improvement) complained that for ten days she had great sensitiveness and soreness in a lump in the left breast. This tumor, about one inch in diameter, had existed for many years in the lower, outer, part of the breast without disturbance. At this time we called it a sebaceous gland. For three or four days it discharged a thick, yellow, bloody fluid of the odor of old cheese. She complained of faint, goneness in epigastrium and sensation of falling, worse after 3 P. M., better after eating and from coffee.

The administration of Hepar sulph. was followed by improvement for one day, odor less offensive and discharge freer. Two days later the lump seemed lifted from its bed in the tissues and presented, just beneath the thinning, superficial skin. At this time she complained of feeling generally miserable, with faint weakness. She received Conium, and by evening, felt decidedly better. After a day of aggravation, of pain in the breast, there were two days of ease, and then one night, when the pain extended through to the shoulder-blade. During this time the lump gradually loosened all its moorings; the first opening closed and two others became one. Through this, after the night of severe pain, the lump was loose enough to be expelled. Externally, it was the size of a common marble, hard, with cheesy surface. The cavity left healed rapidly, with little dark discharge, and all indurations of skin disappeared.

2. Miss G., 31 years of age, a tall, stout burnette, in March complained of a lump in right mammary gland, which she noticed some weeks previously, because of burning pain. Examination revealed a lump two and one-half inches in diameter in the deeper substances more than the superficial, in the upper, outer, portion of

the gland, not freely movable. She had been very nervous about her prospects, because a sister had died recently after a pelvic operation. She had mourned her much. "Soreness of mammæ before menses," "induration of the gland," "complaints from grief," together, led to the selection of Conium. Constipation, nervousness and breast symptoms all showed steady improvement, while coryza developed. She said she had more colds than she ever had had. In four months a hasty examination detected nothing of the lump, and one year later, careful palpation found no hardness remaining.

3. Another patient, treated with Kali iod., selected on the image presented, reports decrease in size and painlessness in a lump, which was one inch in diameter, in upper, inner, part of left mammary gland. The general improvement is such that it has been impossible to have her continue the use of her powders, two weeks in sucession, since last spring, because she feels so well she neglects it.

4. A single woman, of 37 years, with quite an array of symptoms, has a tumor two inches in diameter, freely movable, above nipple in right breast, which was first shown five months after she first noticed it. Drawing, shooting, stinging pains, worse when tired and before menses, with drawing in arm as if the cords were short, were relieved by use of Sulph. Later developing symptoms helped complete an image of Graphites, on which she is now improving. If this does not complete the restoration to order, it will lead to another remedy to continue the work, and there will be no need for local interference in this case.

The following cases are given very briefly without details, as they are reported more fully in the society proceedings from which they are copied. Others may be found in periodical publications.

B. FINCKE'S CASE.

A married woman, of thirty years, had a tumor in right breast two years previously, which disappeared under treatment. Then one developed in left breast, outside and below the nipple, hard, movable, with a second one overlapping it, one and three-fourths inches in diameter. Under Carbo animális, in the course of two and one-half years, the tumors disappeared entirely, leaving the patient quite well.

D. C. M'LAREN'S CASES.

1. A stout Irish woman, forty years old, was condemned to operation, with the entire left breast hard, almost stony, nipple inverted. Under Conium mac., in one month, the breast was entirely soft, natural as the other.

2. A woman, whose sister died of cancer two years before, presented a breast with a lump size of a goose egg. Under Sulphur a cure resulted in six weeks.

3. An Irish woman, with a large tumor of recent and rapid growth in left breast and nipple inverted, received Conium mac. In one month the breast was in a normal condition, without a trace of hard lump.

DR. QUACKENBUSH'S CASE.

A woman of thirty-seven years, suffering with Bright's disease, had a tumor in left breast five inches in diameter. Under Sepia she was cured in three months and remained well.

C. M. BOGER'S CASES.

1. A woman had the left breast and all axillary glands of that side removed. Soon a lump appeared in the right breast. While under treatment with Nitric acid (in potency) the tumor disappeared, and her excellent health enabled her to do more work than in years before.

2. In a young Irish girl, mammary gland, axillary glands, and those between mamma and axilla were all affected. Under Calc. fluor. the indurations had almost entirely disappeared at time of report.

3. A married woman of thirty-three years had a nodule, size of a walnut, in left mammary gland, for twelve years. It seemed deep and attached to the ribs. She reported it painful for two weeks. Bella. relieved the pain, but under Conium mac. the lump grew steadily smaller till cured.

E. E. CASE'S CASE.

A retired school teacher of sixty-one years had a bunch, size of a hickory nut, in left mamma for three months. In two months, under Conium mac., the bunch was entirely gone.

H. W. PIERSON'S CASE.

A woman of thirty-seven years, mother of eight children, had been strongly advised to have an operation within two weeks, for what was called mammary cancer. She had Arsenicum a few months, then Hepar sul. four months, then Phytolacca. Three months after beginning the last remedy the case was reported gland reduced to one-fourth its size, with some indurated lobules, and the woman one of the happiest in Chicago.

W. L. REED'S CASES.

1. A woman, of forty-two years, was seen immediately after manipulations of a surgeon, in investigating a lump in the left breast, which he decided was cancer and must be removed. Arnica relieved the pains and made rest at night possible for one month. Arsenicum alb. then controlled the case. The tumor grew gradually smaller and softer, and in eight months no trace of it was left. Lycop., Nat. mur. and Bry. were used as intercurrents when new conditions precented.

2. A woman, of forty years, mother of several children, reported, among other things, a tumor in right breast, growing in a year to the size of a goose egg. During three months, under Sulph., the tumor entirely disappeared, and she was happy in restored comfort.

L. B. WELL'S CASES.

1. A married woman, of forty-two years, discovered a hard, irregular tumor, size of an ordinary peach, in breast, three months previous to consultation. After Carbo an. and Apis had been given without benefit, the tumor constantly increasing, Ars. iod. controlled the pains. In two years the tumor was reduced to one-third its size, and later she reported trouble in breast removed.

2. A married woman, of sixty-one years, discovered a hard tumor, size of a butternut, in left breast, where she had sharp, stinging pains for three months. Under Ars. iod. pain was controlled, and in three years the tumor was reduced to size of a chestnut, soft and painless.

L. M. KENYON'S CASE.

A woman, aged twenty-eight years, mother of one child, had a

hard lump, size of a hazel nut, in left breast. She first noticed it ten years previously, when nursing her child. It gave no trouble until within a few months. Under Conium the sensitiveness ceased for six months or more, and she thought it diminished in size. In fourteen months she reported that for six weeks it had grown rapidly, and was very painful. Menstrual symptoms presented the image of Sabina, which was given. The breast pain was entirely relieved, and in a few months the tumor disappeared entirely. Up to time of report (fourteen years after) no trouble had been experienced from it.

E. M. RUSHMORE'S CASE.

A married woman, of forty-five years, had a hard tumor in upper part of left breast. The whole breast was exceedingly sore and tender, pains extending to arm and scapula. After six months' treatment with Calc. carb., she reports the tumor entirely disappeared, and she is well.

Potencies used for these cases ranged from 30th to cm., including 20th, 1m and 55m.

DISCUSSION.

Dr. B. F. Betts: It seems to me the most lamentable that we should have so short a time at our disposal to discuss the very valuable papers that this section has presented this afternoon, but each section must be last in order sometimes, and it has fallen to our lot this year to be the last section to report during the session of our State Society meeting, but if we will take into consideration the importance of the papers presented this afternoon, and the fact that many more of our physicians are not present to discuss those papers and hear them read is lamentable; but, nevertheless, the work accomplished is gigantic, because, as my friend, Dr. Gromm, has said, our attention has been drawn to these several points that have been elucidated so clearly by those papers. First of all, as to the administration of ether for the alleviation of suffering, enabling us to perform important surgical operations for the relief of humanity. Then, too, the important subject of extra-uterine pregnancy, which, as has been truly said, is so often overlooked or forgotten, and by having our attention drawn to that, we will, no

doubt, be able to save hundreds of lives. Again, the subject of Cæsarian section and the necessity of the pelvimeter has attracted the attention of few members here, but the subject discussed in the way that has been done by Dr. Gramm and the chairman of our bureau will attract the attention of the practitioners of this State when they read our transactions, and thus great good will come from it. Last, but not least by any means, is the value of those papers which have called our attention to the importance of using the homœopathic remedy in gynæcological practice. The paper of Dr. Kline and the excellent paper of Dr. Loos are all of very great value, and we may apply all the principles claimed and elucidated in these papers to our individual practice if we can only say that if we were placed in the patient's position we would be willing to submit to the same treatment as is advocated. If Dr. Loos can feel that way, I cannot tell what amount of respect I have for a lady physician who directs our attention to the fact that we are missing opportunities for curing members of her sex by not following exactly in her footsteps. We all know the tendency is to resort to the knife, because it is easy and admirably effectual in the removal of these growths. If the experience of physicians can demonstrate to us positively, and they can say they are convinced, as the doctor is, of the efficacy of the homœopathic remedies, we are induced to go right to work again and try to cure all those cases that we would otherwise submit to the knife by means of the application of Homœopathic remedies. But after the trial of the Homœopathic remedy we must still come back to that guiding evidence of our doing right or wrong, which we must seek in our own conscience as to whether we would submit to the same treatment, keep on with the same treatment, if we have the experience of the patient. That is the only criterion, I think, that can guide us justly and properly in these cases.

Dr. F. E. Gladwin: Dr. Loos's paper reminds me of a lady that was sent to me some twelve or thirteen years ago. She was about five feet five inches tall, and light complexioned. She lived in a neighboring town. Six months before I saw her she had received a blow upon the breast, and a tumor formed. Three months before I saw her pains began in the breast. They were of a burning, shooting character, and the glands under the arms were involved. Her family physician diagnosed the case as cancer, told her that she must have the breast removed, and it would be best to have

both breasts removed. Of course, she rebelled. A friend sent her to Philadelphia, and she fell in my hands. The symptoms, as I remember them, were a lump in the right breast about as large as a bantam's egg, with burning, shooting pains, soreness under the arms and pain in the axillary gland on the right side. The girl had never been a healthy child. Taking all her symptoms, I put her on a remedy. I treated that girl about a year, I think. She never had anything but Sulphur. I think, perhaps, she had four doses in all, but the lump entirely disappeared, the patient growing stronger and better all the time. The soreness in the axillary gland disappeared. The last I heard from her she was still better. It never has returned. I heard from her quite a long time afterward.

Another case was sent to me about six months ago. This lady had a lump in the left breast on the upper internal side. She came from up in New York State somewhere. When she discovered the lump she was frightened and went to a physician. He told her it was not cancer, but would be if it was left alone; advised an operation, and sent her to a specialist in New York City. They had all arrangements made to remove the breast and axillary glands. Someone said, "Why don't you consult somebody else first?" So she came to Philadelphia. I found a lump in the breast, with stinging, burning pains. The patient was very nervous. The pains were worse just before the menstrual period. I found several years before her husband had dropped dead in her presence. About six or eight months before she noticed the lump. Her son, about 14 years old, her only child, was killed during athletic sports on the school ground. She had the tumor since with those symptoms and a few others I recall. I put her on Quinine. The lump entirely disappeared. The patient was cheerful, less nervous, and growing better all the time.

INCOMPLETE ABORTION.

EDWIN H. VAN DEUSEN, M. D., PHILADELPHIA.

Obstetrics and gynæcology would have fewer points of contact if women would be content to refrain from interference with pregnancy. Complete abortion is a purely obstetrical case. Incom-

plete abortion, with its demand for exploration and thorough emptying of the uterus, frequently passes into the hands of the gynæcologist, although the obstetrician should be able to cope with the condition. Quite frequently the completion of the abortive act is so long delayed that secondary changes have occurred which can no more be considered obstetrical than can an endometritis or a pyosalpinx.

The incompleteness of abortion in most cases results from interference, and from interference that is crude and ignorant. Abortion resulting from causes that are natural (that is, not artificial), and abortion which is intelligently and skilfully induced, certainly, in most instances, and, perhaps, in all, is complete.

Probably the most frequent cause of incomplete abortion is the introduction into the uterus of a more or less pointed instrument, such as a lead pencil, pen handle, knitting needle, skewer, crochet hook, hair pin, hat pin, uterine sound, syringe nozzle, or uterine dilator. When any of these instruments wounds the uterus or contents or carries infection to the uterus or contents, its use may result in incomplete abortion.

The portion retained is usually all or some part of the placenta and membranes. Occasionally some part of the fœtus, usually the head, is also retained. If sufficient time were allowed the head would probably come away without assistance, but hæmorrhage or evidence of infection often makes it unwise to wait. Perhaps it is possible to separate the head from the trunk of a normal fœtus by violent traction, but certainly in most instances this result is attained only by traction upon the legs or trunk of a disintegrating fœtus. Therefore, a retained head is to be considered in itself as a probable focus of infection.

The retention of a portion of the placenta or membranes results from inflammatory adhesions, which may be caused by traumatism or infection, or from disintegration of the secundines to such an extent that the retained portions are too small to be extruded by the contracting uterus. Occasionally irregular contractions of the uterus render its efforts to expel even a considerable free mass ineffective. Usually time, which may be shortened by Cimicifuga or Pulsatilla, will in these cases bring about the desired result.

Abortion with unruptured membranes is of necessity complete. The desire of all abortionists is to accomplish a complete emptying of the uterus, and yet the first thing done by the average abortion-

ist, whether she be the patient herself or another, is to make a hole through the membranes, the placenta, the fœtus, the uterus, as any or all are before the instrument in its desperate onward plunge. If complete abortion subsequently occurs it is only because the uterus in its resentful vigor empties itself before inflammation and infection have had time to form adhesions. If it is more tolerant or less vigorous the woman bleeds, and hopes, and suffers, and despairs, and finally, does what she should have done at first, consults her dooctor. She is weak from loss of blood, loss of sleep, lack of food and anxiety of mind. Perhaps, also, she has higher temperature, rapid pulse, offensive discharge, distended abdomen, chilliness, headache, or even profound prostration, weakness of the heart's action, mild delirium or coma, more or less complete, according to the stage and character of the infection. The bleeding with its consequent anæmia may have gone on for weeks or even months, according to the limit of endurance, physical and mental, of the patient. The other symptoms, if progressive, point to a danger so imminent that the delay in calling the doctor is not so great, although often more serious.

The primary cause of trouble in these cases is the incompleteness of the abortion and the primary indication for treatment is to complete the act, to empty the uterus. This should be done with intelligent care and thoroughness, bearing in mind that more than once has a curette been pushed through a softened uterine wall, and that such an accident can always be avoided. A curette will often slide over an adherent mass that placental forceps will readily grasp and remove. The finger makes an excellent exploring instrument but a bad curette. No instrument is as dependable for accurate information concerning the uterine cavity as an educated finger. In conjunction with a curette it is a useful substitute for placental forceps. Briefly stated, abortion resulting from causes not artificially produced is usually complete. Abortion when intelligently and skilfully induced is complete. Abortion with unruptured membranes is complete.

The incompleteness of the abortive act depends upon inflammatory adhesions or disintegration of the uterine contents or both. Both the adhesions and the infection causing the disintegration result in the large majority of instances from crude and ignorant interference.

Complete abortion is a purely obstetrical act. Incomplete abor-

tion creates a debatable territory. So we are back to our original proposition that obstetrics and gynæcology would have fewer points of contact if pregnant women would be content to refrain from interference with pregnancy.

CONTRA-INDICATIONS FOR THE USE OF THE CURETTE.

A. W. YALE, M. D., PHILADELPHIA.

In archæological collections various rude instruments offer indisputable evidence that the operation known as curettage was practiced by our ancestors. In an improved form this professional heirloom occupies a conspicuous place among gynæcological instruments to-day, and is the invariable weapon of many practitioners in combatting metritis, endometritis, salpingitis, and other diseases of the uterus and its appendages.

Yet is there not danger at the present time that the curette is being used too indiscriminately, and that it is being employed to the detriment rather than to the improvement of some cases? Beyond doubt many a life has been saved by the prevention of septicæmia, thanks to prompt curettage; yet, on the other hand, the curette has frequently wrought untold havoc and even death by the introduction of septic material into the uterus.

It has been emphatically stated by able authorities that unless every particle of endometrium is removed at a curettage, it had best not be done at all. This is an almost impossible task, as a homely experiment will readily demonstrate. Take a lemon, cut off a small portion of one end, leaving an opening only large enough to admit the curette. Now see how thoroughly the lemon can be emptied of its contents, leaving only the pulpy rind. Equally difficult is the task of removing every vestige of endometrium from an inflamed uterus and leaving it sterile.

What, then, is the legitimate sphere of the curette? From one of our best authorities I have obtained the following reply: "To free the uterus of adherent placenta and retained membranes after miscarriage or abortion, use the curette." Some even go so far as to say that the safest plan, after every miscarriage, is to first curette,

then thoroughly irrigate the uterus, since in these cases an ounce of prevention is worth ten pounds of cure.

If the curette is to be restricted to this use, the inquiry may naturally arise, what shall be done with cases of metritis or endometritis, or even salpyngitis? It is claimed that in many instances of this character curettage has been followed by marked improvement. Granted this to be true, the amelioration of the condition is in all probability due to the dilatation and straightening of the uterine canal, this providing free drainage.

From his own experience the writer desires to suggest a new treatment for these cases, which, if followed, will, he trusts, relegate the curette to its proper place. This, as has already been stated, is to free the uterus of pathological matter only.

Briefly outlined, the treatment is as follows: Thoroughly douche the vagina and insert a sterile speculum. Now cleanse the cervix with an antiseptic solution, preferably Picratol and Glycerine. If an aqueous solution is employed, dry the cervix with sterile cotton. By means of a sterile applicator now insert one or more suppositories. It is well to dip not only the applicator but also the suppositories in Picratol and Glycerine, since it greatly facilitates the insertion into the uterus. When the applicator is inserted into the cervix by means of a gentle pressure on the pusher, the suppositories will be forced into the uterus. Should the organ be large and flabby it is well to use several suppositories, and by turning the applicator first toward one side then the other, these may be delivered into different parts of the uterus.

These suppositories which the writer has used with gratifying success have been made for him by Wyeth & Bro., and he desires to publicly acknowledge the courtesy of this firm, who, at great trouble, provided suppositories of different shapes and formulæ for clinical observation.

The shape which the writer has found most useful for general use, which dissolves most readily, and is most likely to be retained in the uterus, is the cylindrical one, an inch and a half to two inches in length. This readily fits the applicator, and as you will perceive, is a modification of the uterine gauze packer. It is, of course, necessary to immediately place a tampon tightly against the mouth of the uterus to prevent the suppository from being expelled.

The formula found most useful is Picrate of silver (Picratol)

in a glycerine and gelatine base. This organic salt of silver sinks deep into the tissues, penetrating even to the glandular structures of the uterus. The glycerine, by its hygroscopic action, depletes the glands and the surrounding tissues of the serous engorgement, while the Picrate of silver possesses the property of allaying the mucous inflammation.

The suppositories having been placed in the uterus, melt in the course of a few hours, and the medicament flows evenly over the entire uterine cavity, thoroughly penetrating it, as no curette could. In cases of metritis and endometritis, it has been the writer's pleasure to find that after a few treatments, even uteri and tubes which have been badly engorged, show a marked improvement. In fact, they are in far better condition than after a curettage, for the same diseased condition without any of the dangers incurred by breaking up adhesions which may exist, the rough handling of ovaries and tubes by the common practice of drawing the uterus down for dilatation and curettement. There is also the risk that the lymphatics may take up septic material introduced by careless curettage, incomplete removal of the lining membrane, or bacteria contained in a non-sterile douche, not to mention the probable ten days in bed after the curettage or the disagreeable after-effects of the anæsthetic.

True, upon the introduction of the suppository, the uterus contracts, and the patient experiences a few labor-like pains, which last from a few moments to an hour at the very most, after which she usually feels considerable relief from the depletion of the engorged organ.

In cases of salpingitis where a tubo-ovarian mass is present, and even in severe cases which require operation for their cure, considerable relief, and, in some cases, even a reduction of the tumor is acomplished.

In regard to frequency of treatment, this is entirely at the discretion of the physician. In specific or septic cases the suppositories may be used once or twice a day. In acute cases once or twice a week will be found sufficient. For chronic cases when the uterus is large, and it is desirable to induce subinvolution, a treatment should be given once a week. For other patients, especially nulliparæ, once a month, between the menstrual periods will be found ample.

It is well to wait till all improvement from one treatment has

ceased before inserting another suppository, except in cases where the uterus has been invaded by pathogenic material.

The writer expects to be severely criticised for the views expressed. He will no doubt be censured for advocating the repeated introduction of any substance into the uterine cavity, not only because of the danger of carrying bacteria into this sacred precinct, but also the risk of producing abortion in the pregnant uterus.

In regard to the first objection, during the two years he has made use of this treatment he has yet to observe the slightest indication of deleterious effect, except the few labor-like pains already mentioned. If directions are carefully followed, it is practically impossible for bacteria to be carried into the uterus, since the applitor should only come in contact with the external os. Furthermore, if bacteria should by any chance be taken up in the glycerine on the suppositories, the Picratol will immediately kill them.

The suppositories cause no systemic disturbance, and the writer has yet to note any interference with the indicated remedy.

In answer to the objection that it will produce abortion, it need only be said that the physician bears in mind the oath of Hippocrates, knowing that it is his solemn duty to save life, not to kill. Upon him rests also the responsibility that his patient shall be given the most speedy and permanent cure for her sufferings with a minimum of risk.

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